

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Baltimore, et al.

Serial No: To be assigned

Filed: January 4, 2002

For: Nuclear Factors Associated with
Transcriptional Regulation

Attorney Docket No. APBI-P04-035

Art Unit: To be assigned

Examiner: To be assigned

Assistant Commissioner for Patents
U.S. Patent and Trademark Office
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Sir:

Please enter the following amendment:

In the specification:

Please replace the only complete paragraph under the heading Related Applications on page 1 with the following text:

This application is a continuation of Serial No. 08/464,364, filed June 5, 1995, which is a divisional of Serial No. 08/418,266, filed April 6, 1995, which is a continuation of 07/791,898, filed November 13, 1991, which is a continuation-in-part of application of Serial No. 06/946,365 (WHI86-10), filed December 24, 1986, and of Serial No. 07/318,901 (WHI87-11A), filed March 3, 1989, and of Serial No. 07/162,680 (WHI87-11), filed March 1, 1988, and of Serial No. 07/341,436 (WHI89-02) filed April 21, 1989, and of Serial No. 06/817/441 (MIT-4167), filed January 9, 1986, and of Serial No. 07/155,207 (MIT-4167A), filed February 12, 1988, and of Serial No. 07/280,173 (MIT-4167AA), filed December 5, 1988. The contents of the ten referenced applications are incorporated herein by reference.

The replacement paragraph presented above incorporates changes as indicated by the marked-up version below.

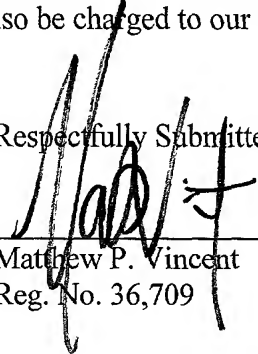
This application is a continuation of Serial No. 08/464,364, filed June 5, 1995, which is a divisional of Serial No. 08/418,266, filed April 6, 1995, which is a continuation of 07/791,898, filed November 13, 1991, which is a continuation-in-part of application of Serial No. 06/946,365 (WHI86-10), filed December 24, 1986; and of Serial No. 07/318,901 (WHI87-11A), filed March 3, 1989; and of Serial No. 07/162,680 (WHI87-11), filed March 1, 1988; and of Serial No. 07/341,436 (WHI89-02) filed April 21, 1989; and of Serial No. 06/817/441 (MIT-4167), filed January 9, 1986; and of Serial No. 07/155,207 (MIT-4167A), filed February 12, 1988, and of Serial No. 07/280,173 (MIT-4167AA), filed December 5, 1988. The contents of the ~~seven~~ten referenced applications are incorporated herein by reference.

Although Applicant believes no fees are needed in connection with filing this Preliminary Amendment, should fees be due in connection with the filing of this Amendment, please charge the fees to our **Deposit Account No. 18-1945**. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit account.

Date: January 4, 2002

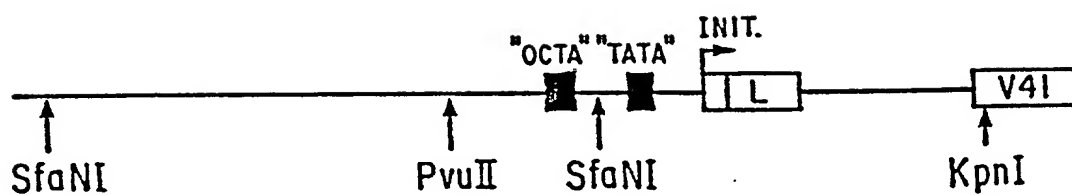
Customer No: 28120
Docketing Specialist
Ropes & Gray
One International Place
Boston, MA 02110
Phone: 617-951-7739
Fax: 617-951-7050

Respectfully Submitted,


Matthew P. Vincent
Reg. No. 36,709

2044070 "SFAE001

J1046 U.S. PTO
10/037415
01/04/02



MOPC-4I κ CHAIN GENE

FIG.1A

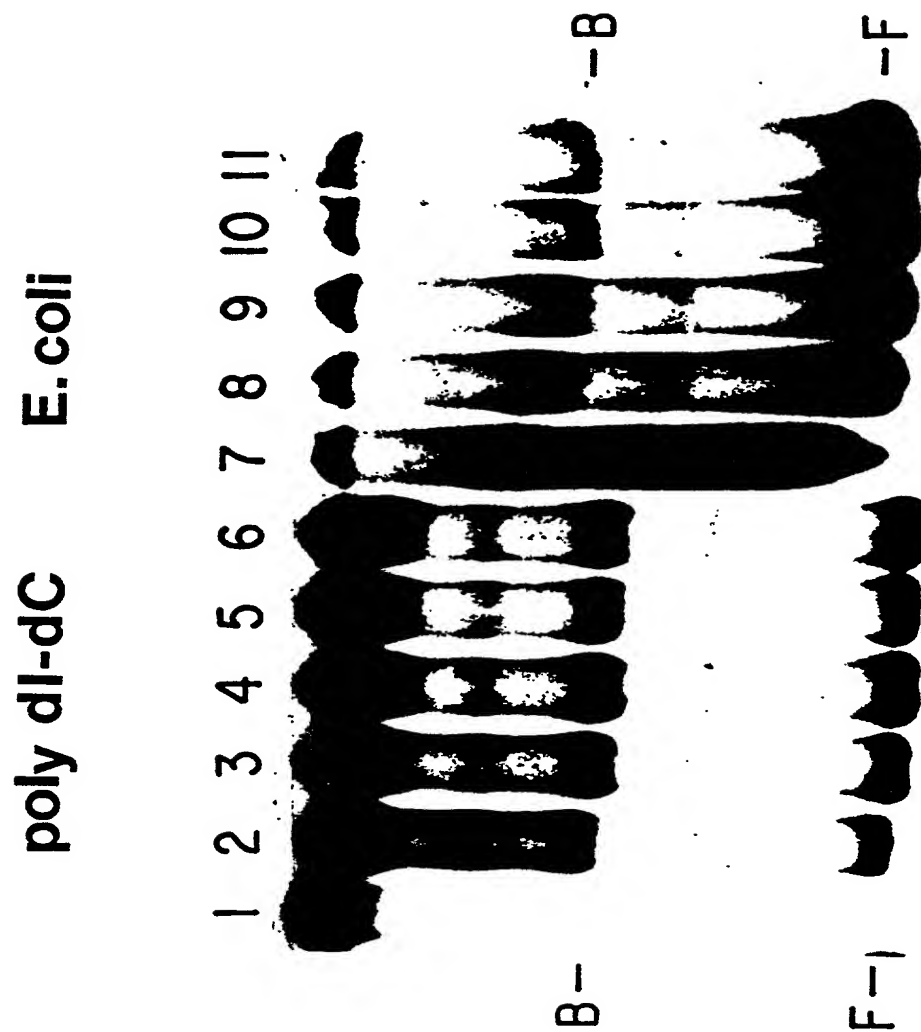


FIG.1B



FIG.1C

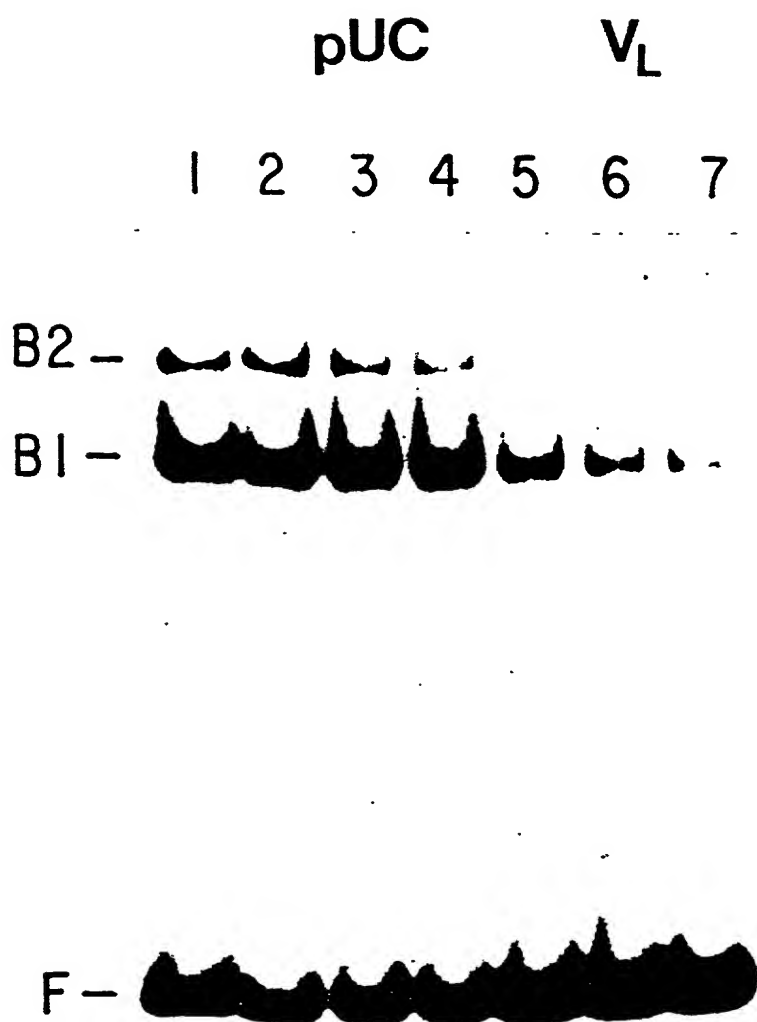


FIG.2A

FIG.2B

1 2



HeLa

1003745-010403

FIG.3



V_L coding strand (-66)	[*] TCTTAATA	ATTTCAT	ACCCTC [*] CAC
V_H non-coding strand (-50)	CGCACATG	ATTTCAT	ACTCATGA
$J_H - C\mu$ coding strand (166)	CCTGGGTA	ATTTCAT	TTCTAAAA

FIG.4A

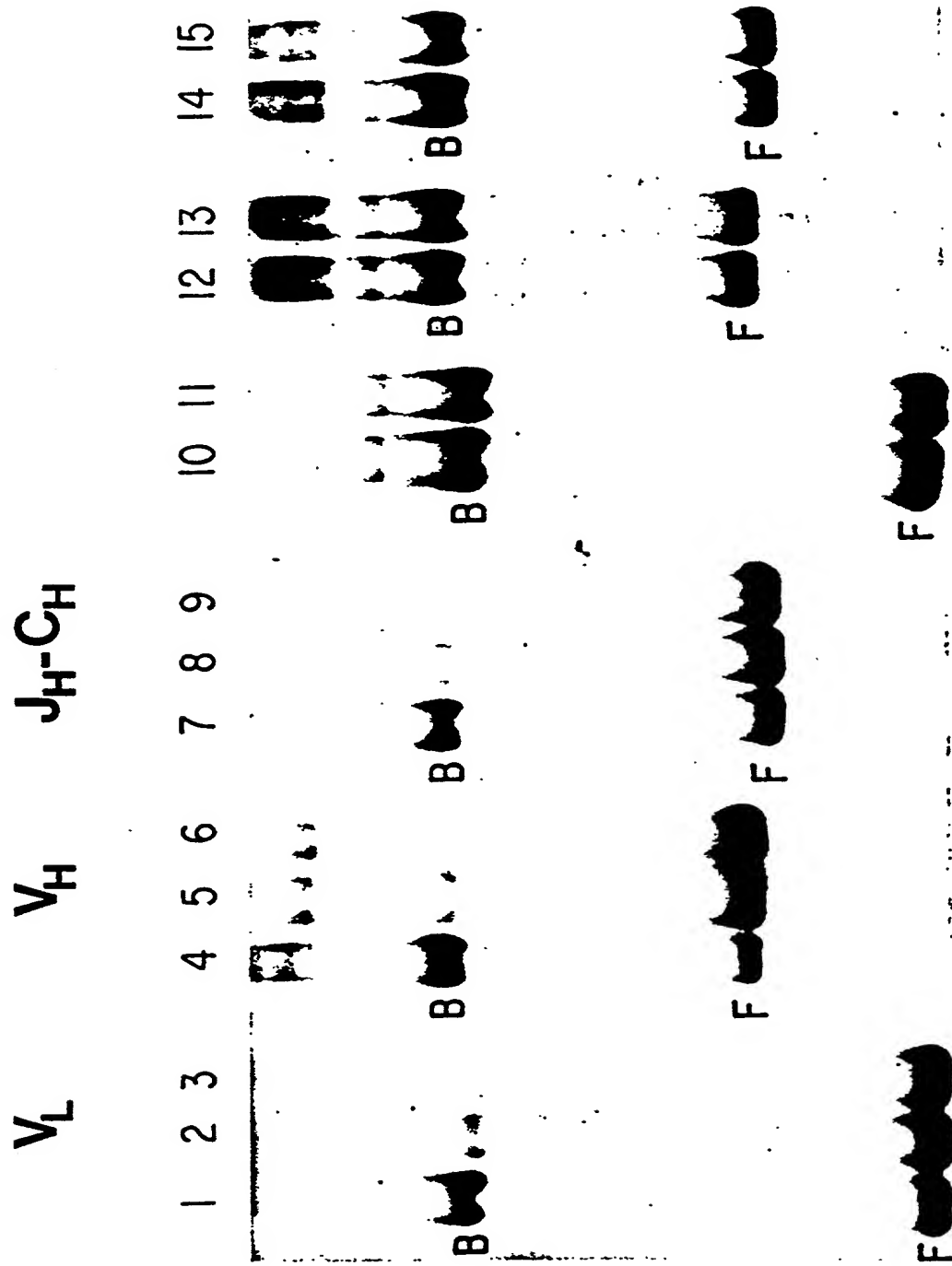


FIG.4B

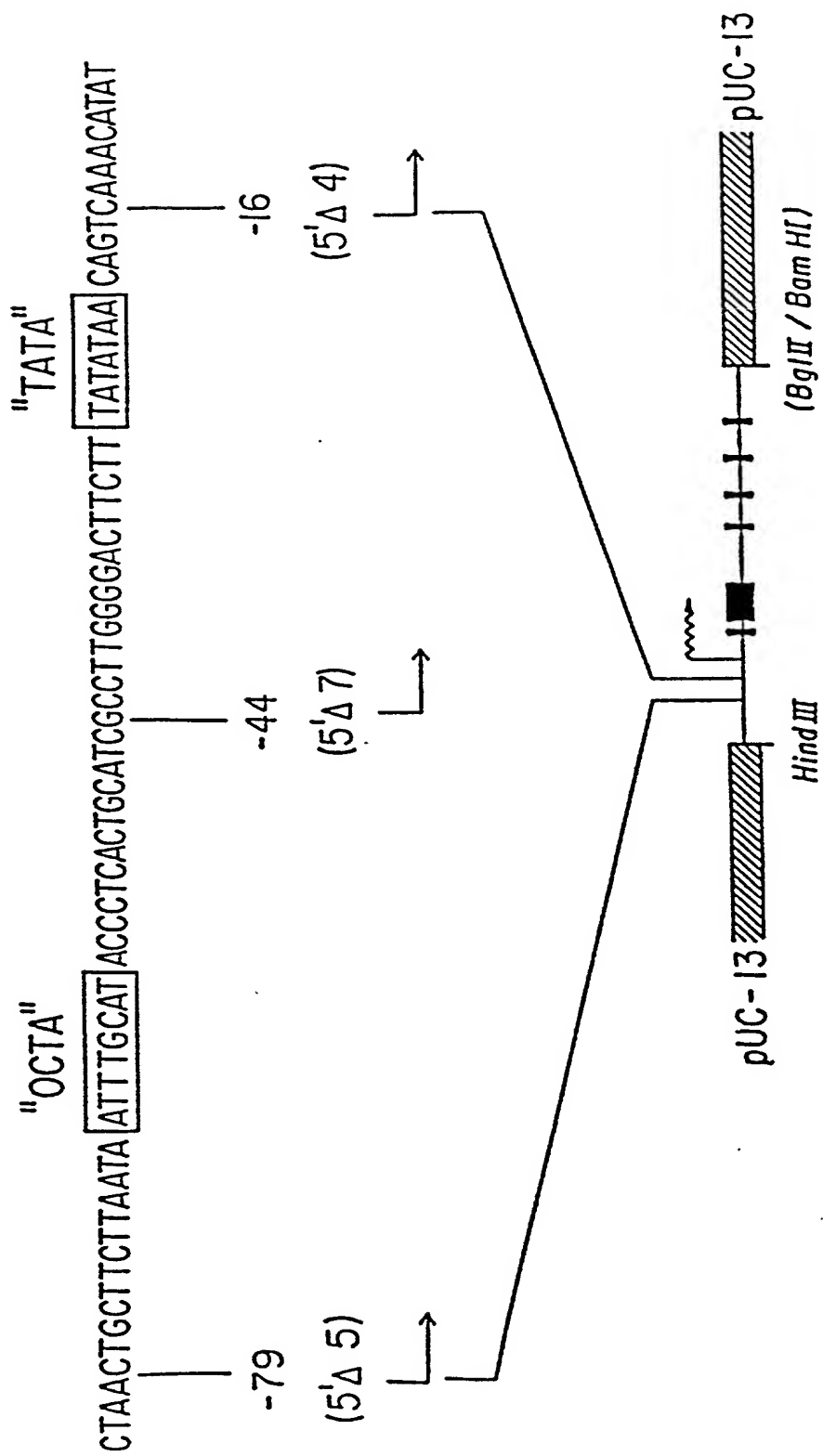


FIG.5A

FIG.5B

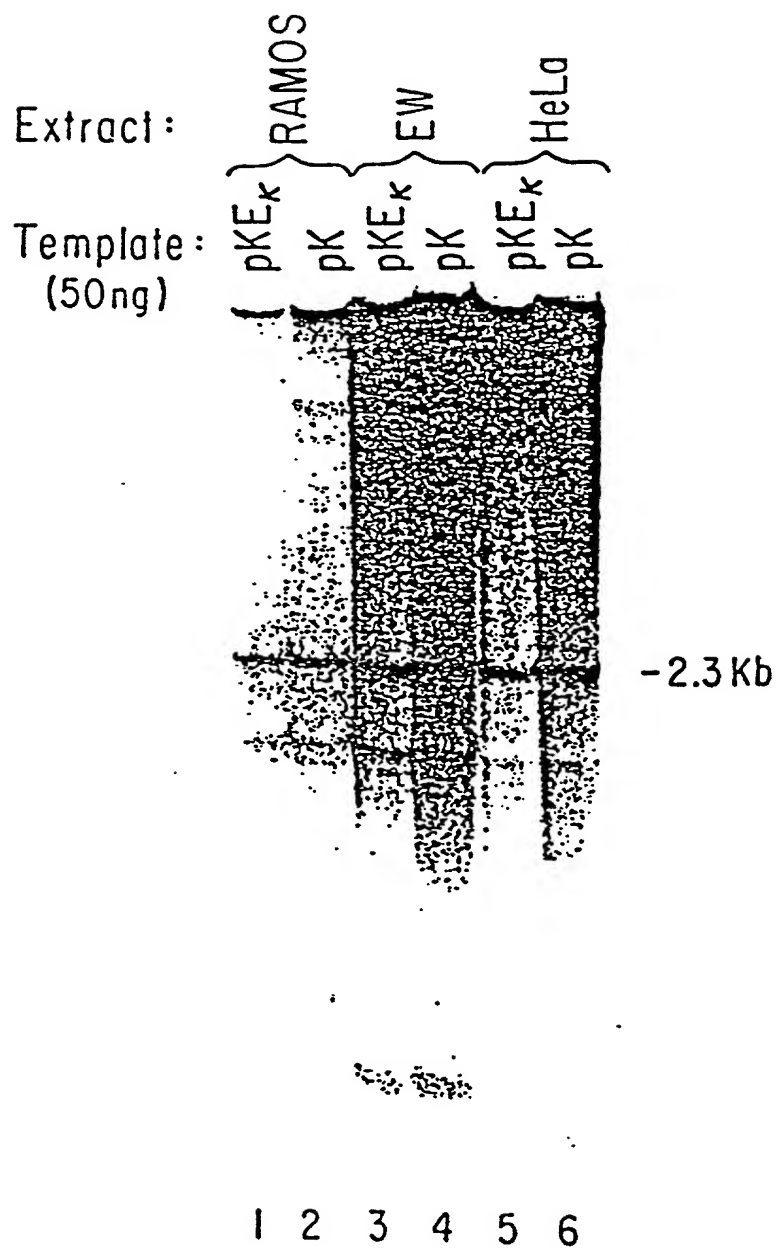
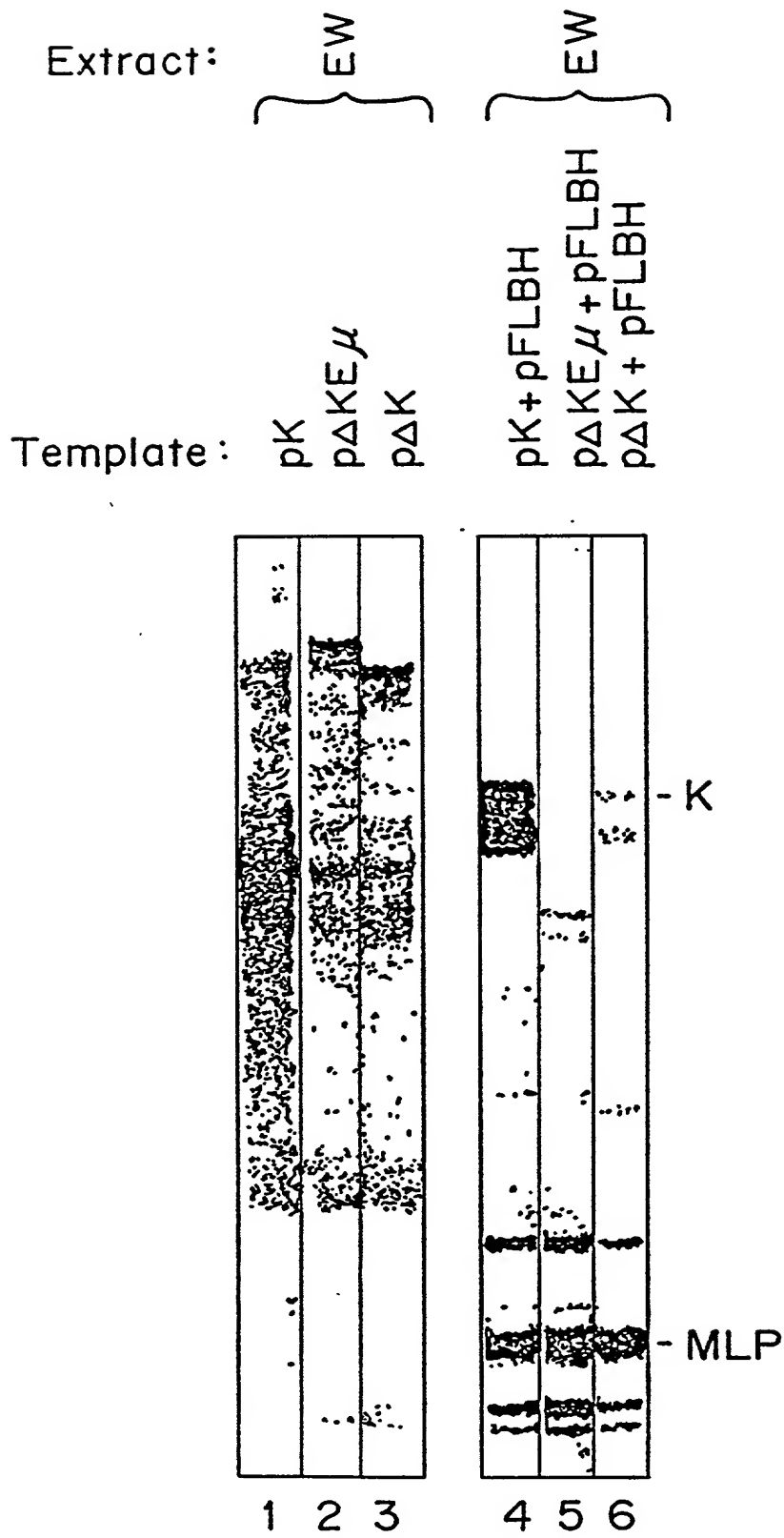


FIG.6



IgNF-A →
IgNF-B →

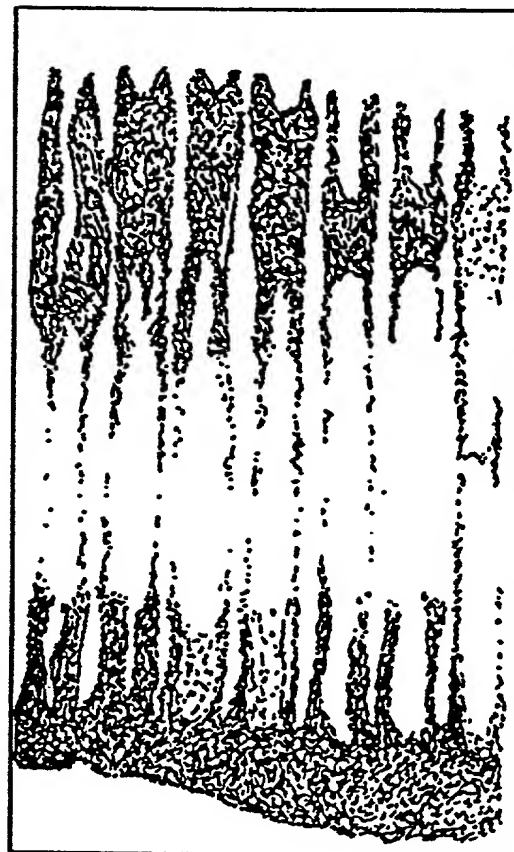
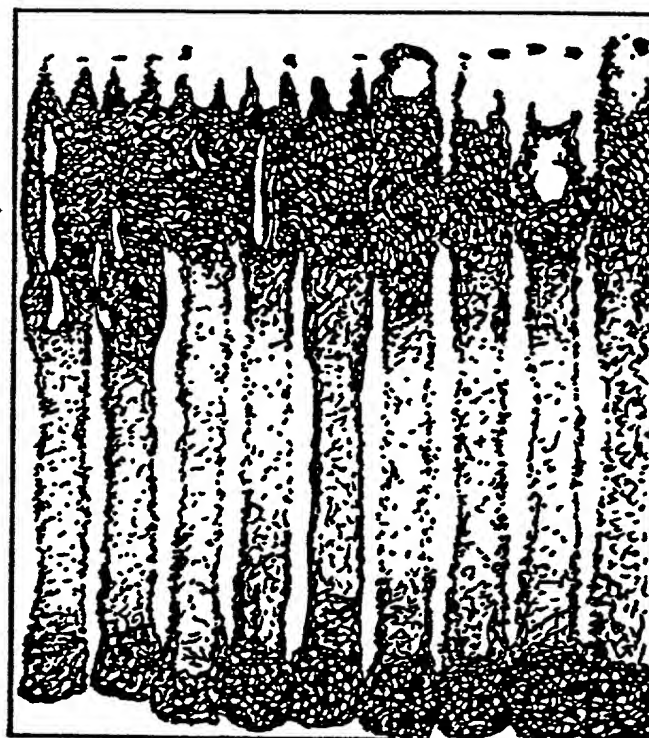


FIG.7

IgNF- A →
IgNF- B →



WEHI 231
EL 4
BW5147
W7
RLO 11
HeLa
ψ 2
MEL
COS

Tcell

FIG.8

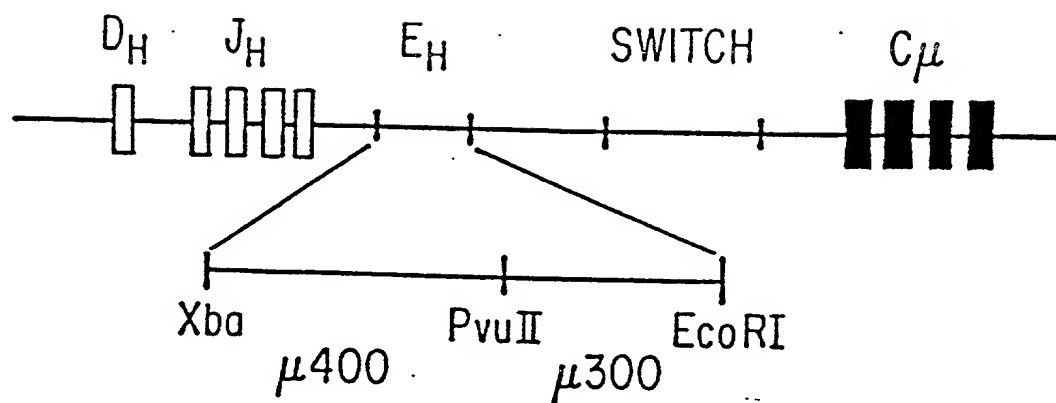


FIG.9A

Probe: $\mu 300$
 Extract: EW/N
 Competitor:

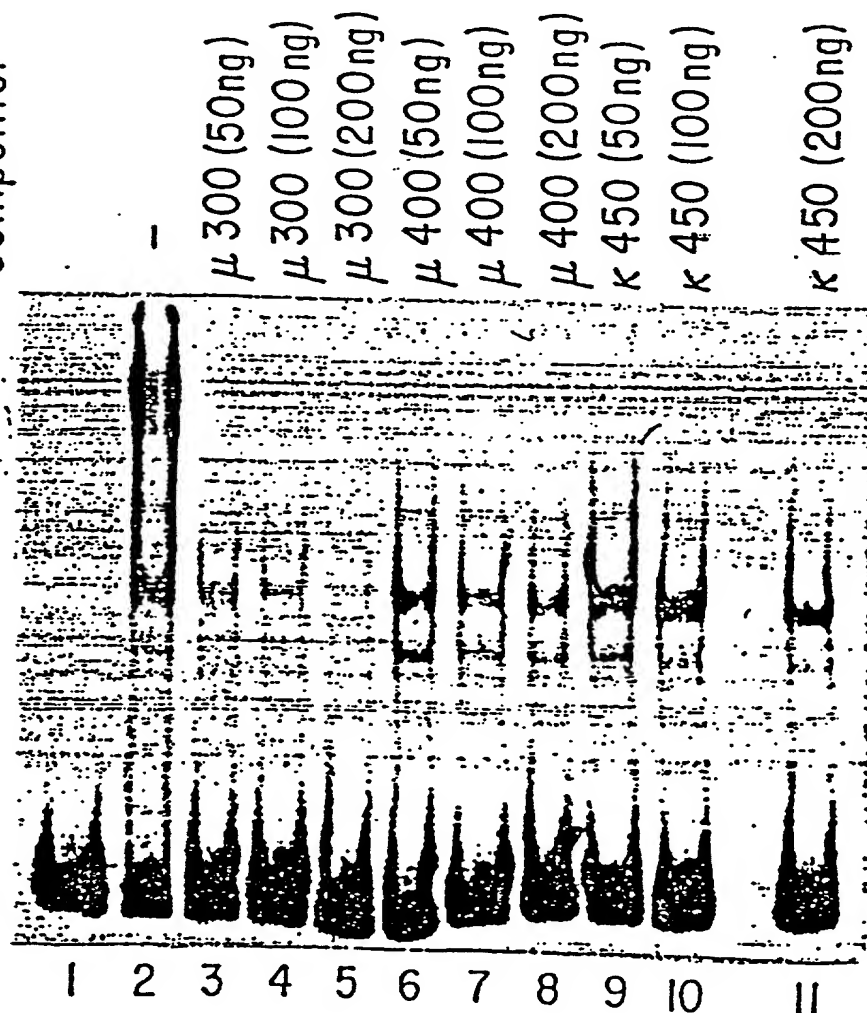


FIG.9B

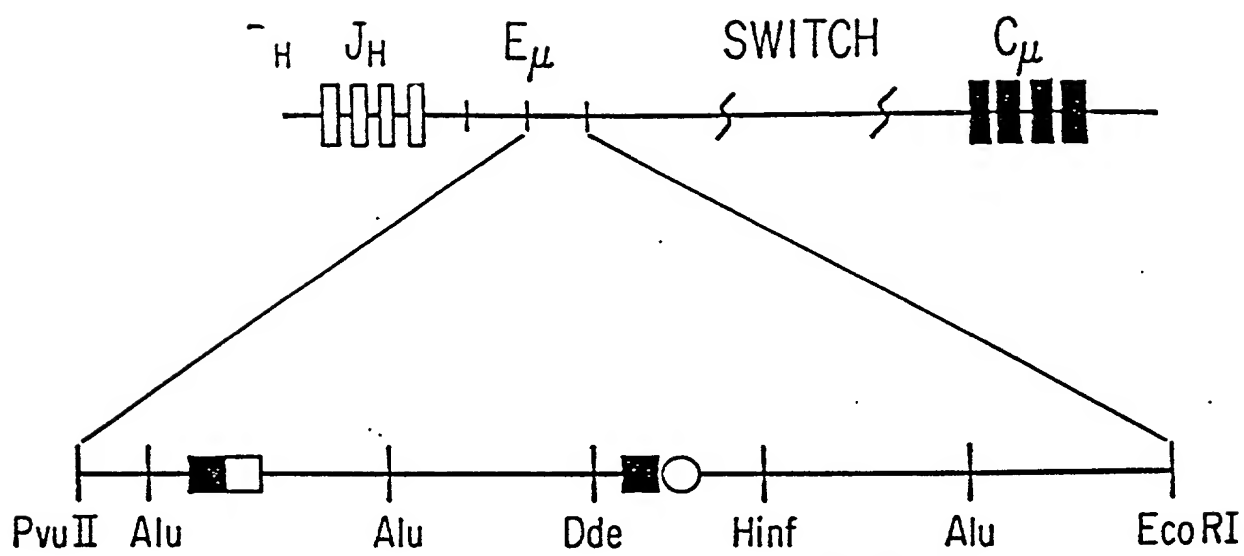


FIG.10A

■ : E

□ : ?

○ : Octamer (ATTGTCAT)

FIG.10B

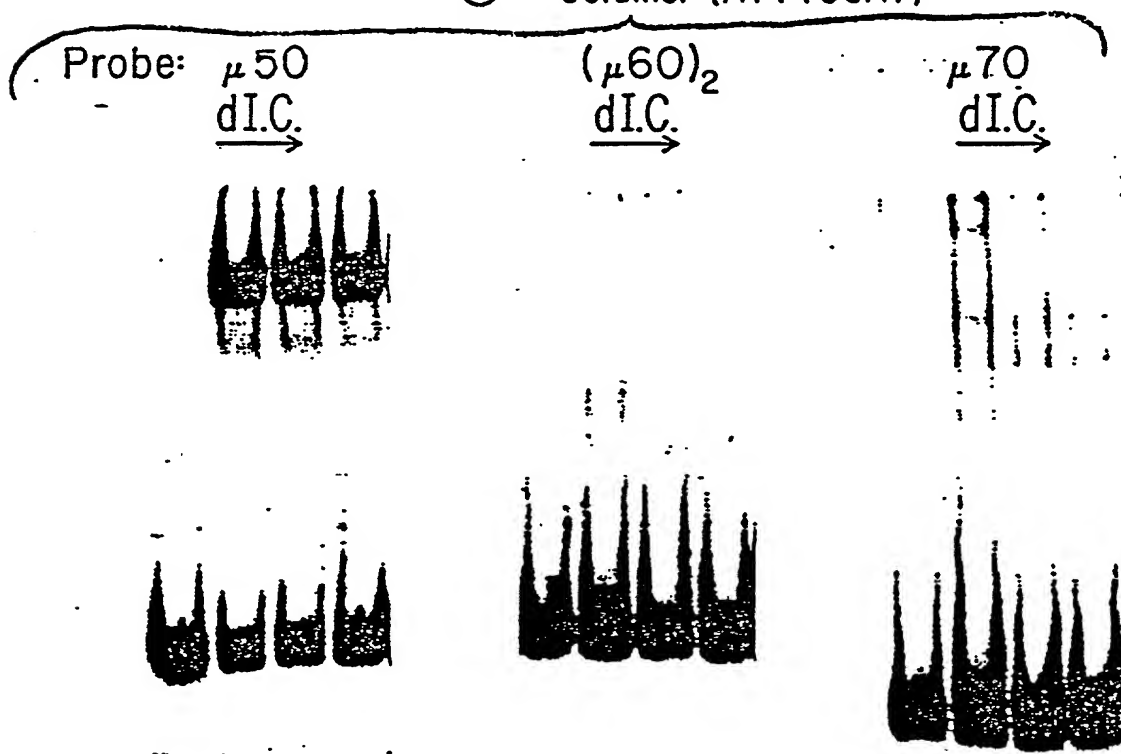
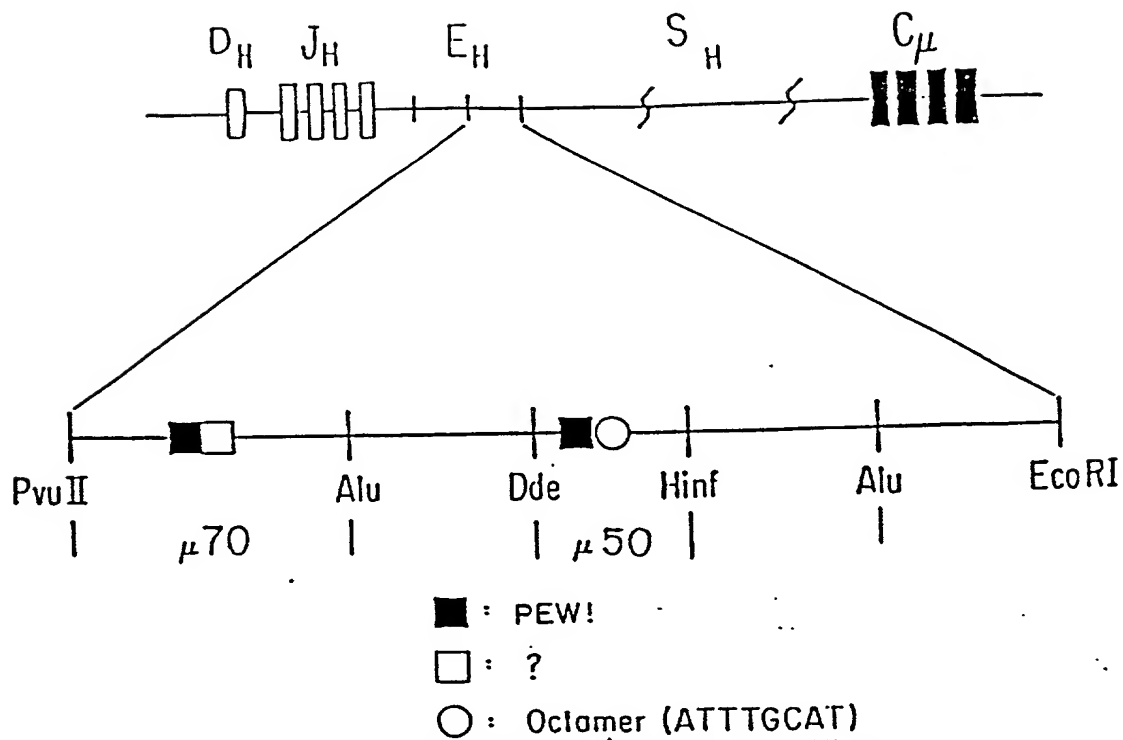


FIG.10C



LABEL: $\mu 70$
 COMPETITOR:

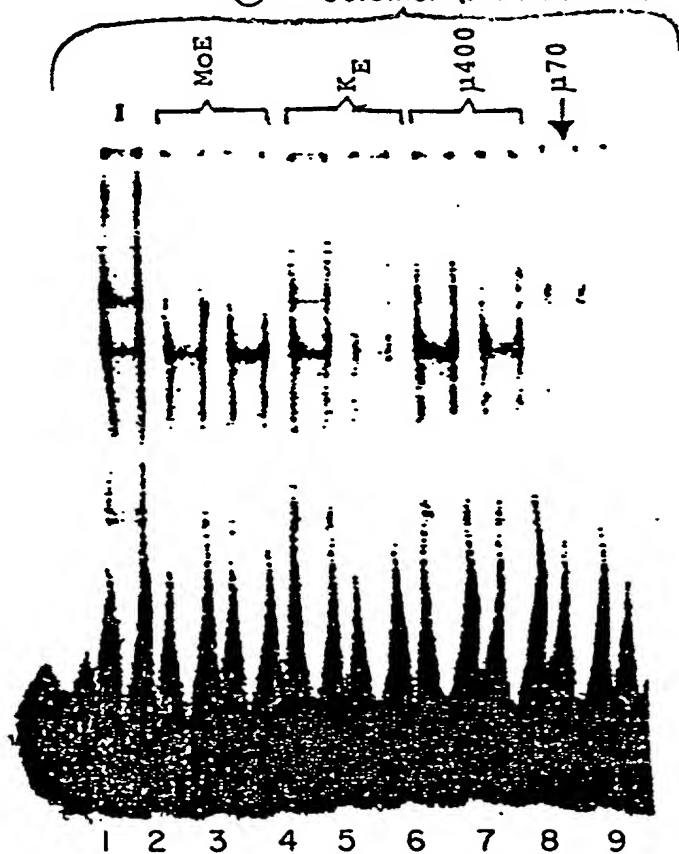
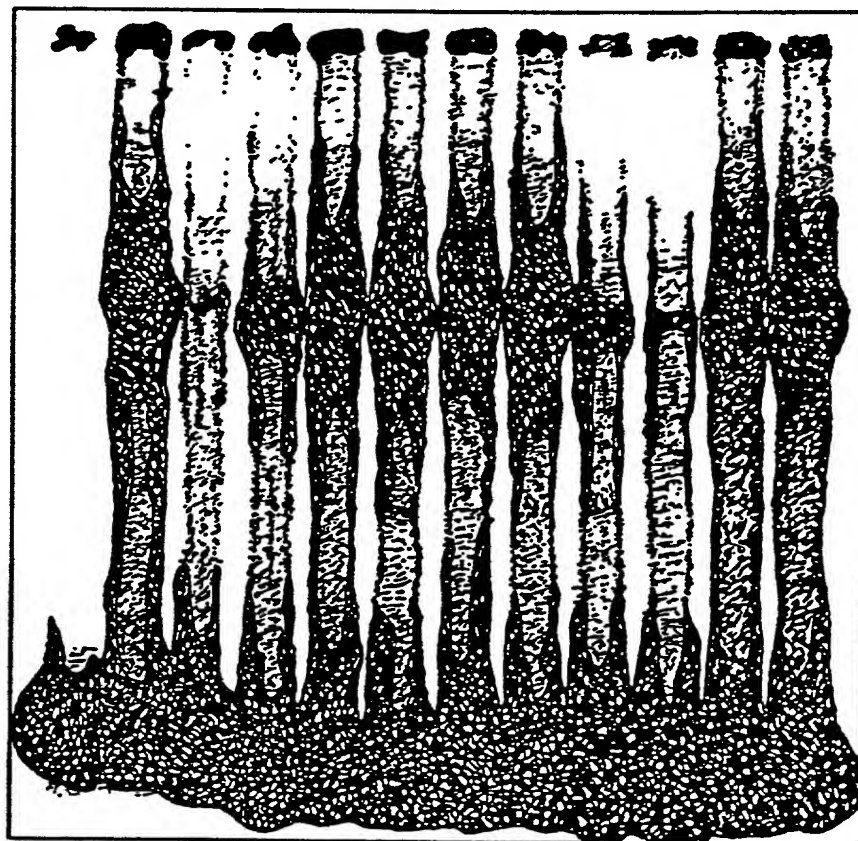


FIG.10D

FIG.10E

Probe: $\mu 70$
Extract: EW (C)
Competitor

-
-
$\mu 300$ (50 ng)
$\mu 400$ (50 ng)
$\mu 50$ (10 ng)
$\mu 50$ (30 ng)
$\mu 60$ (10 ng)
$\mu 60$ (30 ng)
$\mu 70$ (10 ng)
$\mu 70$ (30 ng)
$\mu 170$ (20 ng)
$\mu 170$ (60 ng)



1 2 3 4 5 6 7 8 9 10 11 12

FIG.IIA

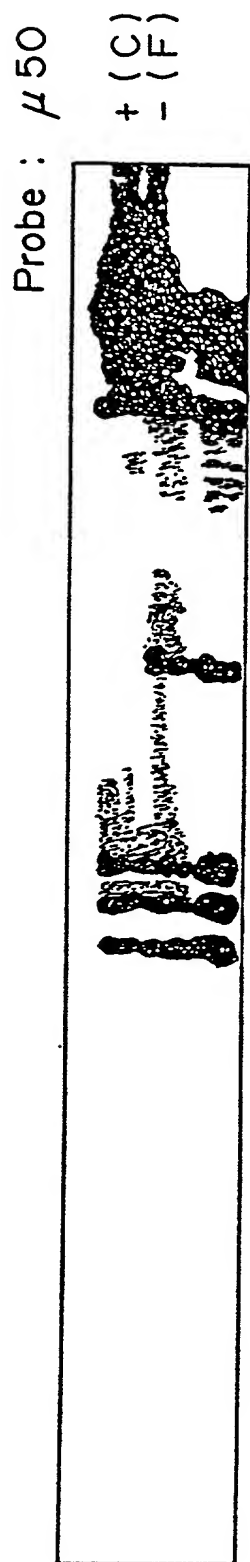
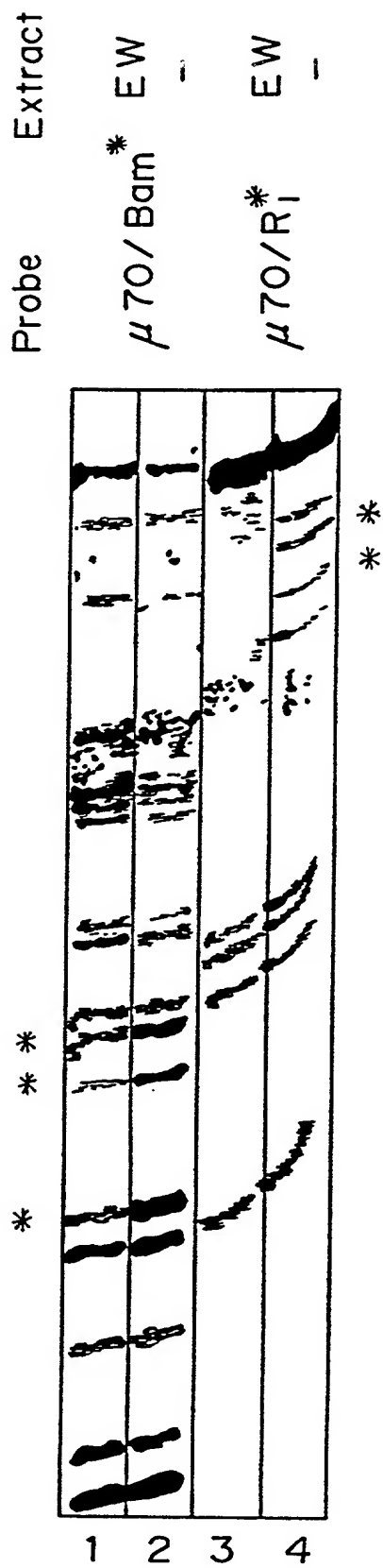


FIG.IIB



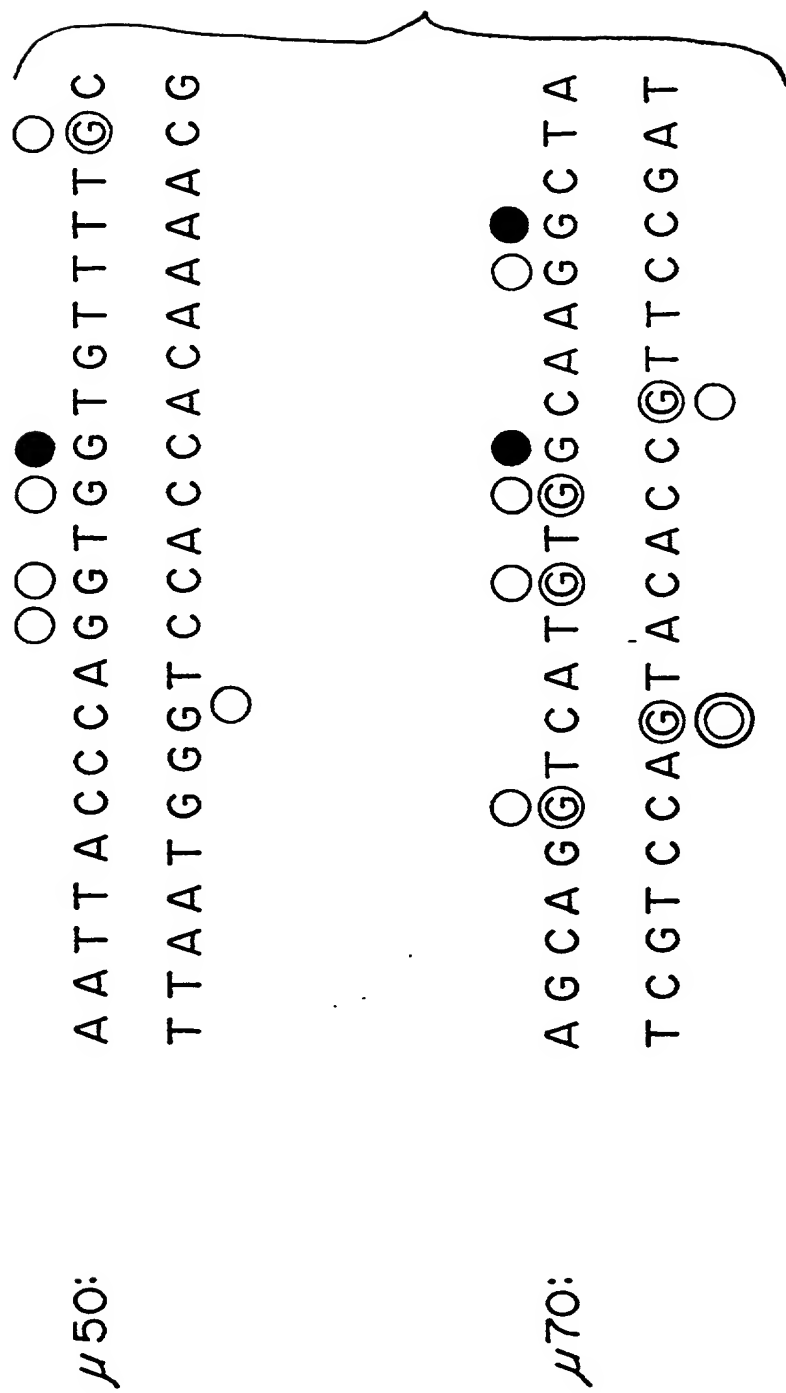


FIG.12A

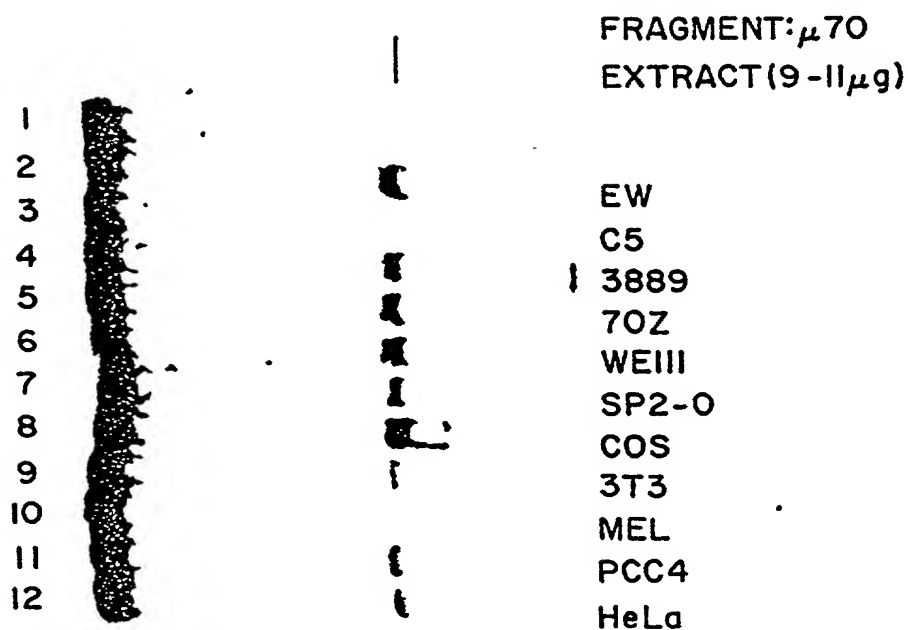
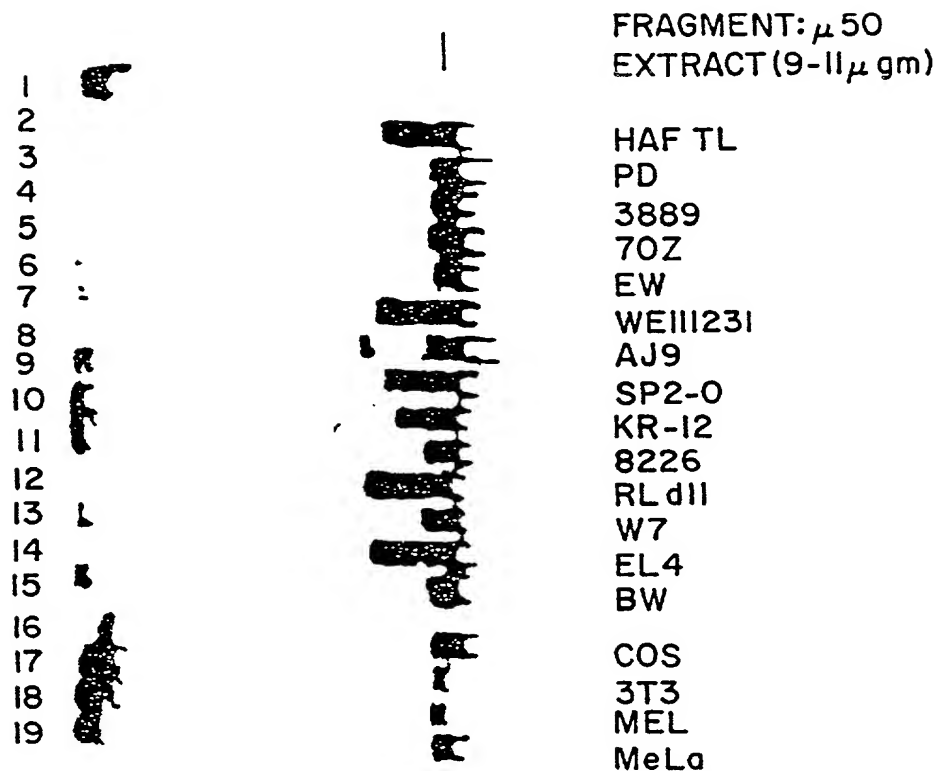


FIG.12B

FIG.13A

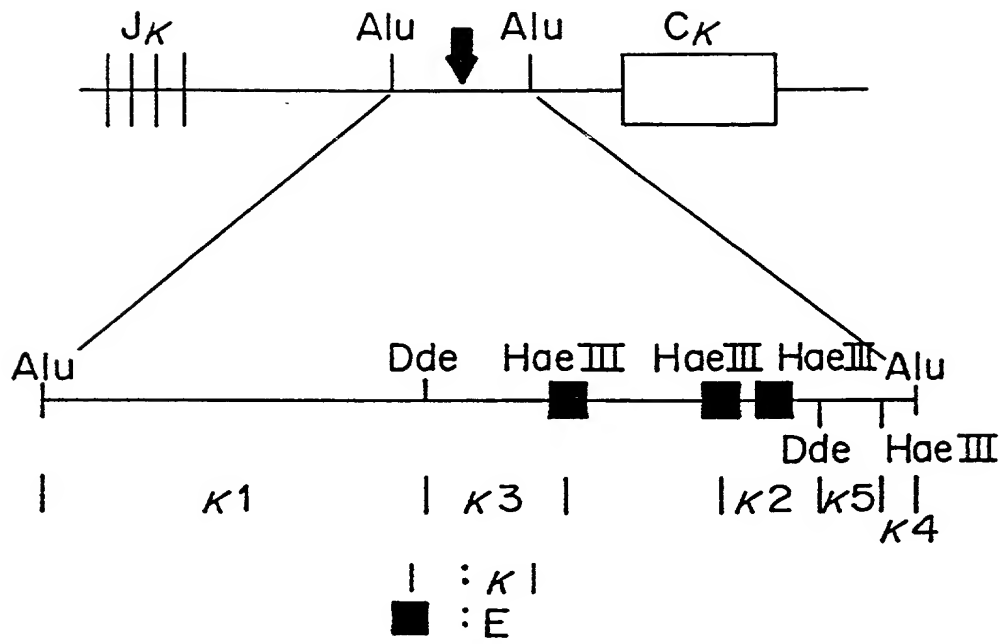


FIG.13B

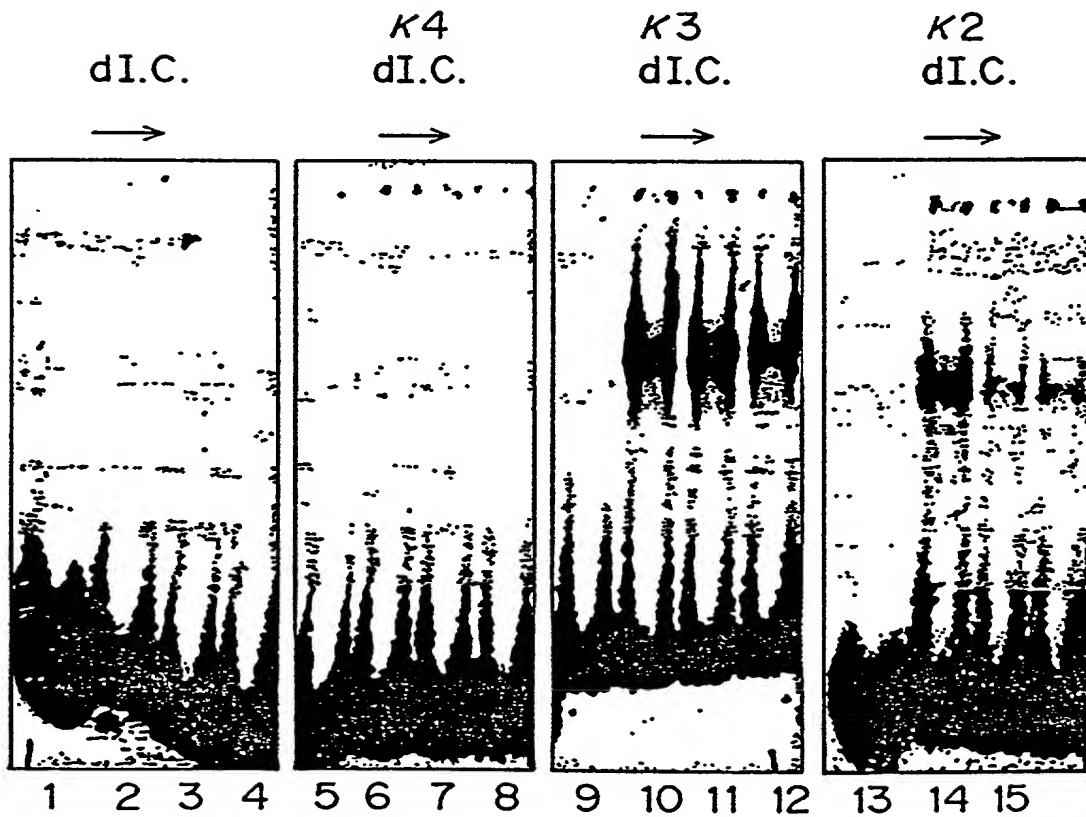


FIG.13C

Extract	EW/c	1 μ l
fragment	Comp	
K2	-	
K2	-	
K2	M70	10ng
K2	M70	30ng
K2	(M60) ₂	10
K2	(M60) ₂	30
K2	(M170) ₂	20
K2	M170	60
K2	SV 40E	50
K2	SV 40E	150

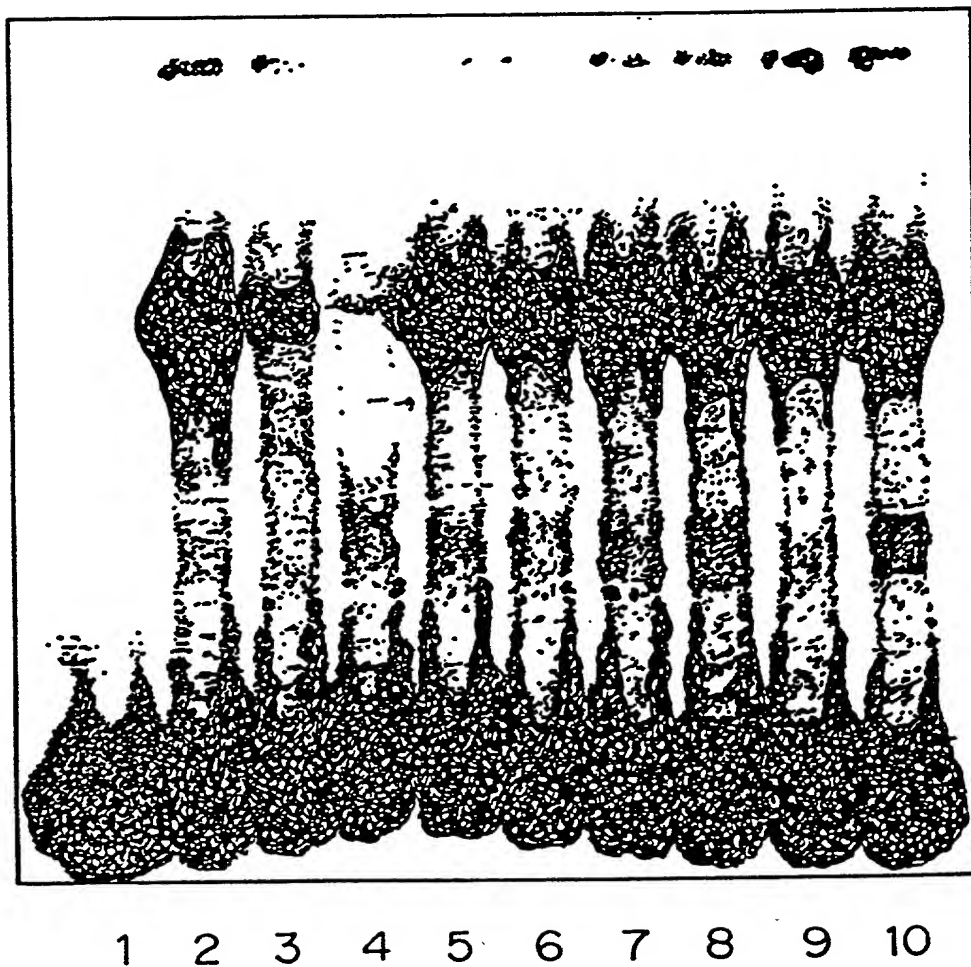


FIG.13D

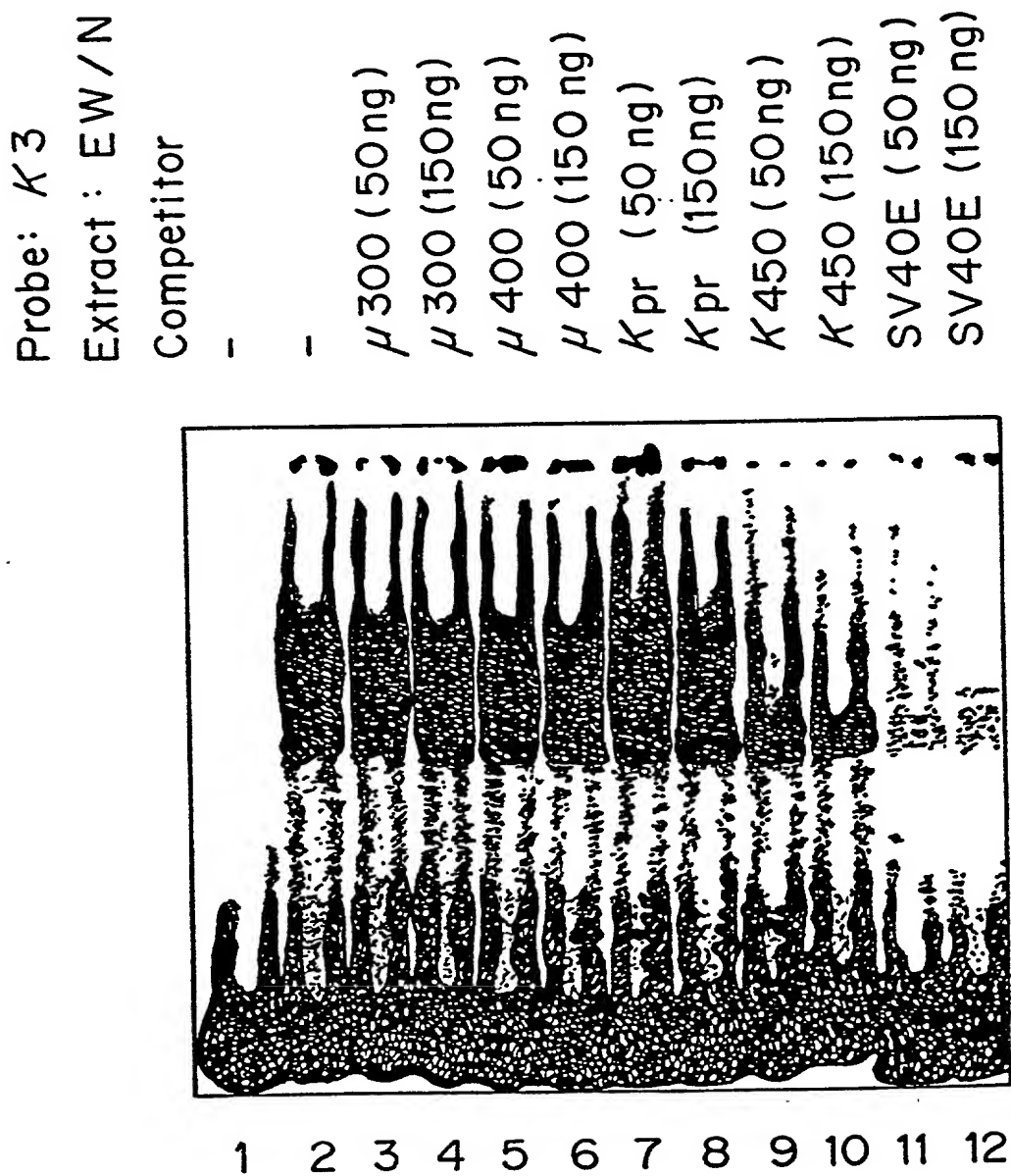


FIG.14

Probe: K-3/Dde*

Extract

MPC II

-

WEHI 231

-



1

2

3

4

FIG.15A

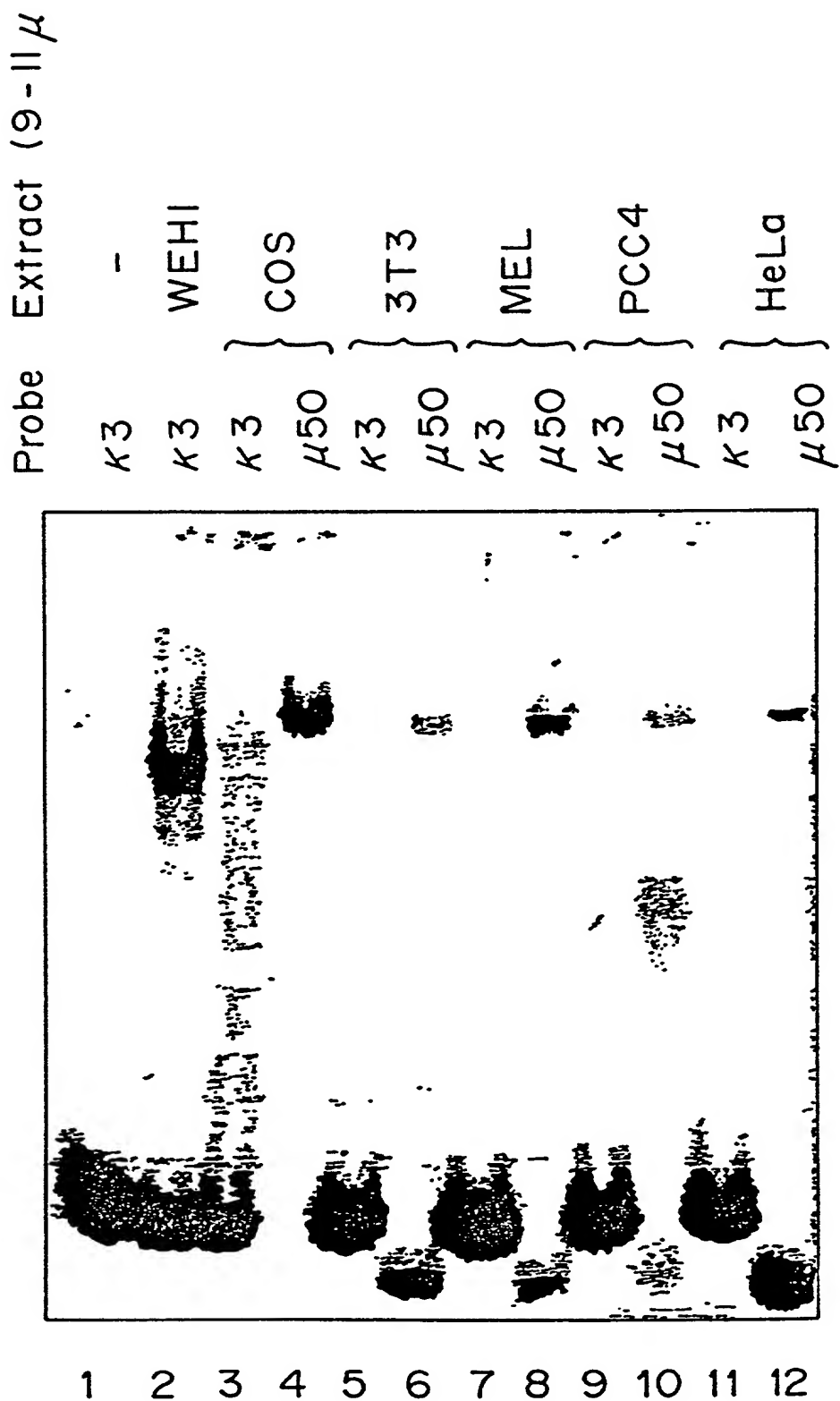


FIG. 15B

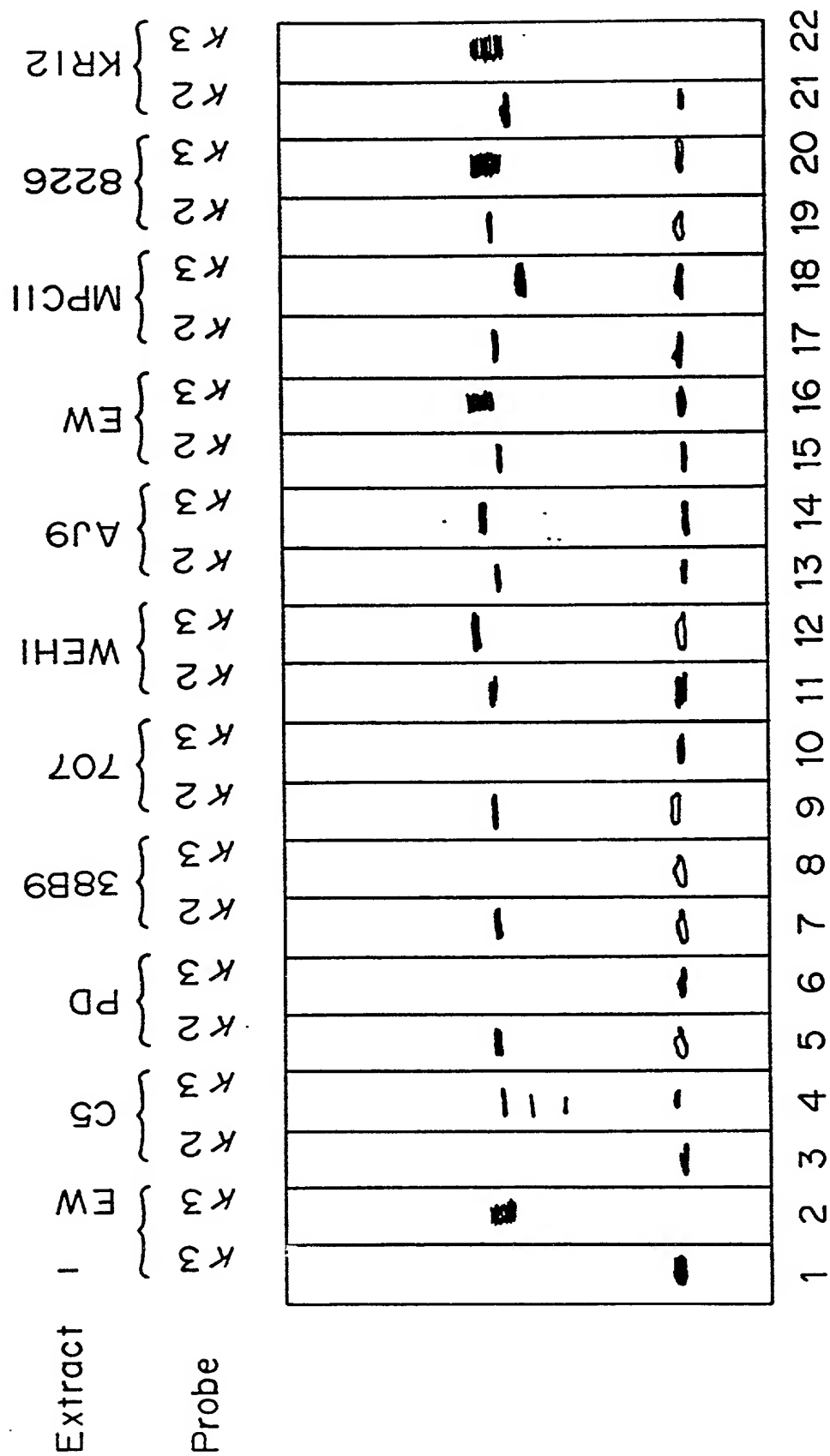


FIG.16

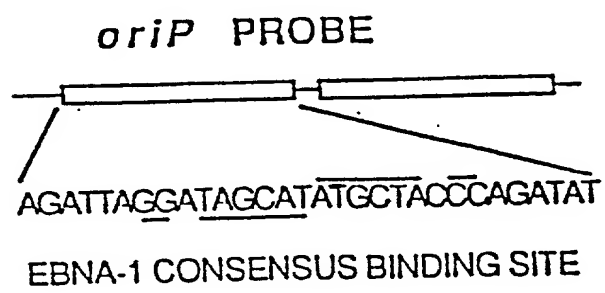
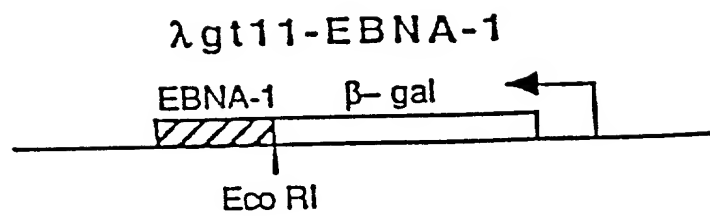


FIG.17

A.

<i>MHC</i>	<u>TGGGGATTCCCCA</u>
<i>mhc1</i>	TGcGGGATTCCCaA
κ EN	aGGGGAcTttCCg
κ en	aaatt _a AcTttCCg
<i>SVEN</i>	TGGGGAcTttCCA
<i>HIV</i>	TGGGGAcTttCCA
	aaGGGAcTttCCg


```

1261 GTTACTACCTTATCCTCAGCTGTGGGGACGCTCCACCCCAGCCGGACAGCTGGAGGGGGT
-----+-----+-----+-----+-----+
V T T [L] S S A V G T [L] H P S R T A G G G
Y Y L I L S C G D A P P Q P D S N M G W

1321 GGGGGCGGGGCGGGGCTGCGCCCCCCTCAATTCCATCCCCTCTGTCACTCCCCCACC
-----+-----+-----+-----+-----+
G G G G G A A P P L N S I P S V T P P P
G M G R G C A P P Q F H P L C H S P T P

1381 CCGGCCACCAACAGCACAAACCCAGCCCTCAAGGCAGCCACTCGGCTATCGGCTTG
-----+-----+-----+-----+-----+
P A T T N S T N P S P Q G S H S A I G L
G H N Q Q H K P Q P S R Q P L G Y M L V

1441 TCAGGCCTGAACCCCAGCACGGGGTAAGTGGGTGCACGTGGGAAGCTGTGGGGAGAAGCA
-----+-----+-----+-----+-----+
S G L H P S T G +
A P E P Q N G V S G C T W E A V G R S R

1501 GCGTCGCTGCTCCTTCTAGGGTGGGGAGCGGCACCCAGTTATGTTGGCAGGTCCCTGCC
-----+-----+-----+-----+-----+
V A A A S R V G S G T P V M L A G P C P

1561 CCTGCTAATGCCTCTGCTTTGCCTCTTGCAGAAGCACAATGGTGGGGTTGAGCTCCGGCT
-----+-----+-----+-----+-----+
C +

1621 GAGTCCAGCCCTCATGAGCAACAACCCTTTGGCCACTATCCAAGGTGCGTGCTGCCTCAT
-----+-----+-----+-----+-----+

1681 GTCACACCCATCGTCACCAGCCCCGGAATTTCGAG
-----+-----+-----+-----+

```

FIG.18A (CONT.)

ACGACCATTTCCTCGAGGCCCTCAACCTGAGCTTCAAGAACATGTGCAAACCTCAAG
 781 -----+-----+-----+-----+-----+-----+-----+
 T T I S R F E A L N L S F K N M C K L K
 D H F P L R G P Q P E L Q E H V Q T Q A

 CCCCTCCTGGAGAAGTGGCTCAACGATGCAGAGACTATGTCTGTGGACTCAAGCCTGCCC
 841 -----+-----+-----+-----+-----+-----+-----+
 P L L E K W L N D A E T M S V D S S L P
 P P G E V A Q R C R D Y V C G L K P A Q

 AGCCCCAACAGCTGAGCAGCCCCAGCCTGGGTTTCGAGCCTGCCGGCCGGAGACGCAAG
 901 -----+-----+-----+-----+-----+-----+-----+
 S P N O L S S P S L G F E P A G R R R K
 P Q P A E Q P Q P G F R A C M P E T Q E

 AAGAGGACCAGCATCGAGACAAACGTCCTCGCCTTAGAGAAGAGTTTTCTAGCGAAC
 961 -----+-----+-----+-----+-----+-----+-----+
 K R T S I E T N V R F A L E K S F L A N
 E D Q M R D K R P L R L R E E F S S E P

 CAGAAGCCTACCTCAGAGGAGATCCTGCTGATCGCCGAGCAGCTGCACATGGAGAAGGAA
 1021 -----+-----+-----+-----+-----+-----+-----+
 Q K P T S E E I L L I A E Q L H M E K E
 E A Y L R G D P A D R R A A A H G E G S

 GTGATCCGCGTCTGGTTCTGCAACCGGCCCCAGAAGGACAAACGCATCAACCCCTGCAGT
 1081 -----+-----+-----+-----+-----+-----+-----+
 V I R V W F C N R R Q K E K R I H P C S
 D P R L V L Q P A P E G E T H Q P L Q C

 GCGGCCCCCATGCTGCCCAGCCCAGGGAAGCCGGCCAGCTACAGCCCCCATATGGTCACA
 1141 -----+-----+-----+-----+-----+-----+-----+
 A A P M L P S P G K P A S Y S P H H V T
 G P H A A Q P R E A G Q L Q P P Y G H T

 CCCCAAGGCGGCGGGGACCTTACCGTTGTCCCAAGCTTCCAGCAGTCTGAGCACAACA
 1201 -----+-----+-----+-----+-----+-----+-----+
 P Q G G A G T L P [L] S Q A S S S [L] S T T
 P A G R G D L T V V P S F Q Q S E H N S

FIG.18A (CONT.)

CCTCAAGGCAGCCACTCGGCTATCGGCTTGTGAGGCCTGAACCCCAGCACGGGGCCCTGGC
 1411 -----+-----+-----+-----+-----+-----+-----+
 P Q G S H S A I G L S G L N P S T G P G
 S A Q P L G Y R L V M P E P Q M G P N P
 CTCTGGTGGAACCCCTGCCCCTTACCAGCCTTGATGGCAGCGGGAATCTGGTGCTGGGGGC
 1471 -----+-----+-----+-----+-----+-----+-----+
 L W W N P A P Y Q P .
 L V E P C P L P A L M A A G I W C W G Q
 AGCCGGTGACCCCCGGGGAGCCCTGGCCTGGTGACCTCGCCGCTCTTCTTGAATCATGC
 1531 -----+-----+-----+-----+-----+-----+-----+
 P V Q P R G A L A W .
 TGGGCTGCCCCTGCTCAGCACCCCGCCTGGTGTGGGCCTGGTCTCAGCAGCGGCTGCGGG
 1591 -----+-----+-----+-----+-----+-----+-----+
 TGTGGCAGCCTCCATCTCCAGCAAGTCTCCTGGCCTCTCCTCCTCATCCTCTTCATCCTC
 1651 -----+-----+-----+-----+-----+-----+-----+
 ATCCTCCTCCTCCTCCACTTGCAGCGAGACGGCAGCACAGACCCTGGAGGTCCAGGGGGG
 1711 -----+-----+-----+-----+-----+-----+-----+
 CCCGAGGCAGGGTCCAAACCTGAGTGAGGGCCAGCCATGCCTCCCCTCCCATTCTCTGG
 1771 -----+-----+-----+-----+-----+-----+-----+
 TCCCTGCCCCGGAATTC
 1831 -----+-----

FIG.18B

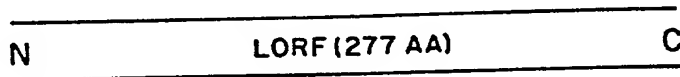
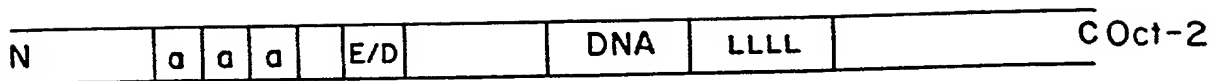


FIG.18C

204070 5442E001

AGGGAACAAAAGCTTGCATGCCTGCACCATGGCCATCGATAT
 CGATCCCCAATTCCGGCCC..GCCCCGGAATTGGGTACCGAGCTCGAATTC

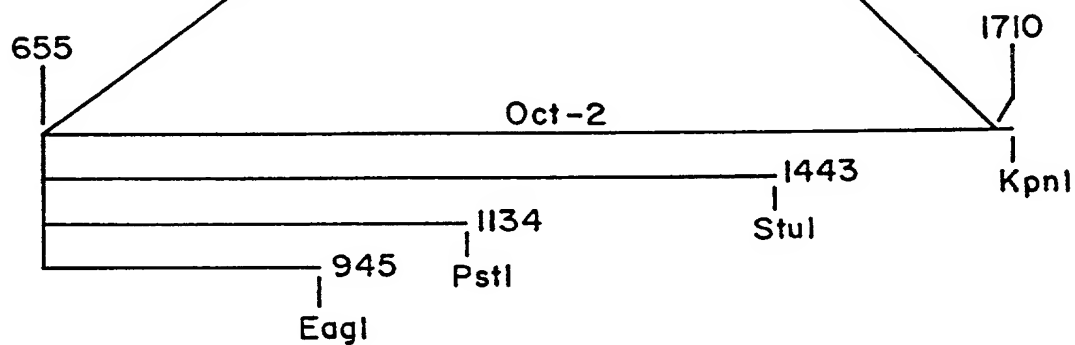


FIG.19

cut SKKQBVLFSEQKEALRLAFALDPYPNVGTIEFLANELGLATRTITNFEHNHRMLKQOV
* * * *

en EKRPBTAFSSEQLARLKREFFENRXYLTERRRQQLSSELGLNEAQIKIWFQNKRAKIKKST
* * *

Antp RKRGBQTYTRYQTLEKEFFHENRYLTERRRRIEIAHALCLTERQIKIWFQNRBMKWKKEN
* * *

(conserved
residues in
homeo-box
family)

FIG. 20

FIGURE 21A

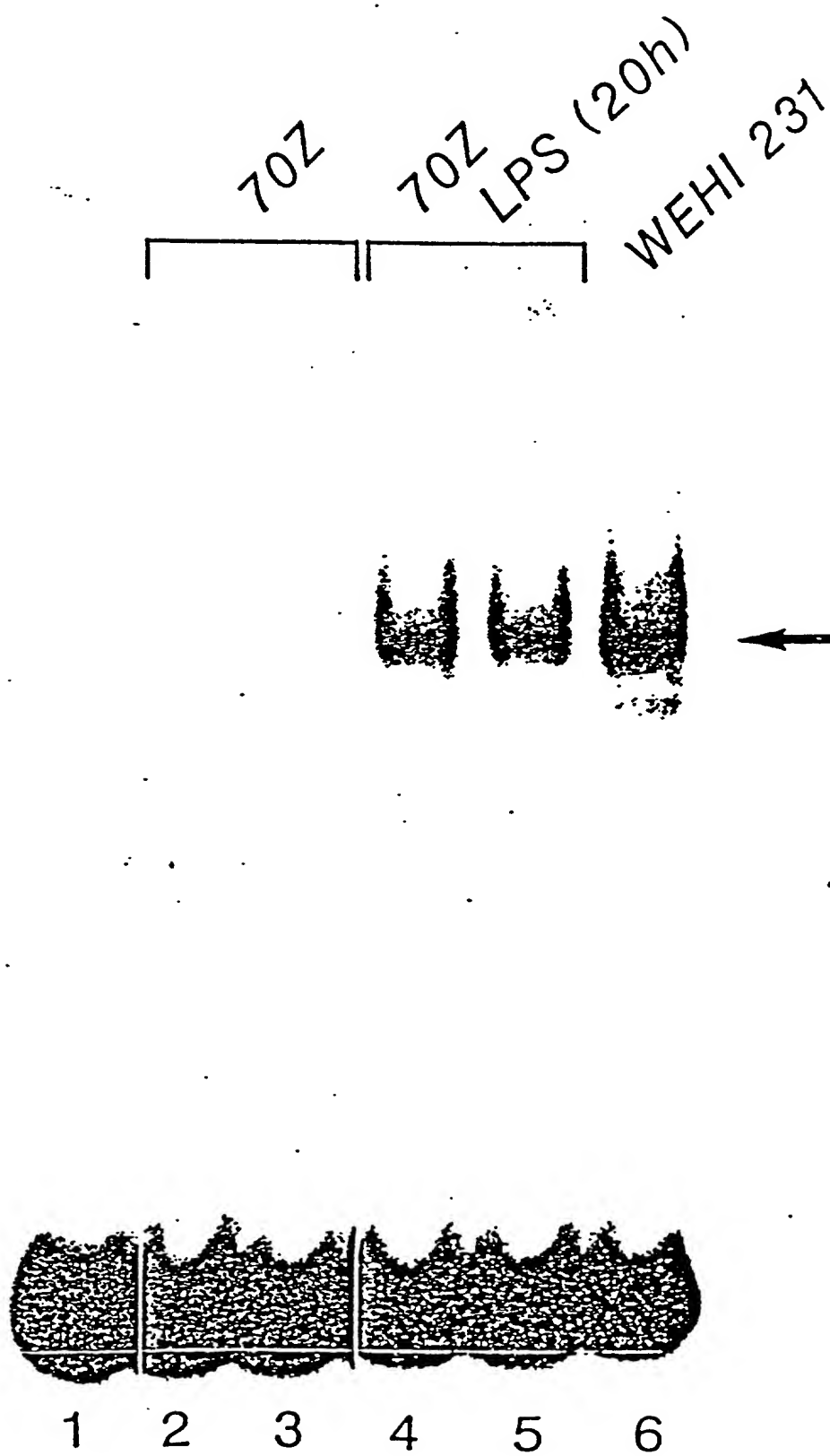
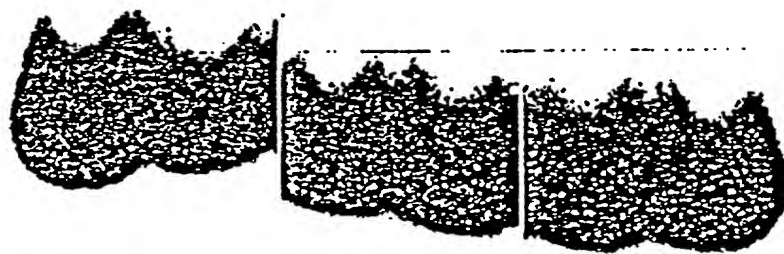
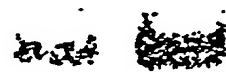


FIGURE 21B

WEHI 231
PD

PDILPS
(20h)



1 2 3 4 5 6

FIGURE 22A

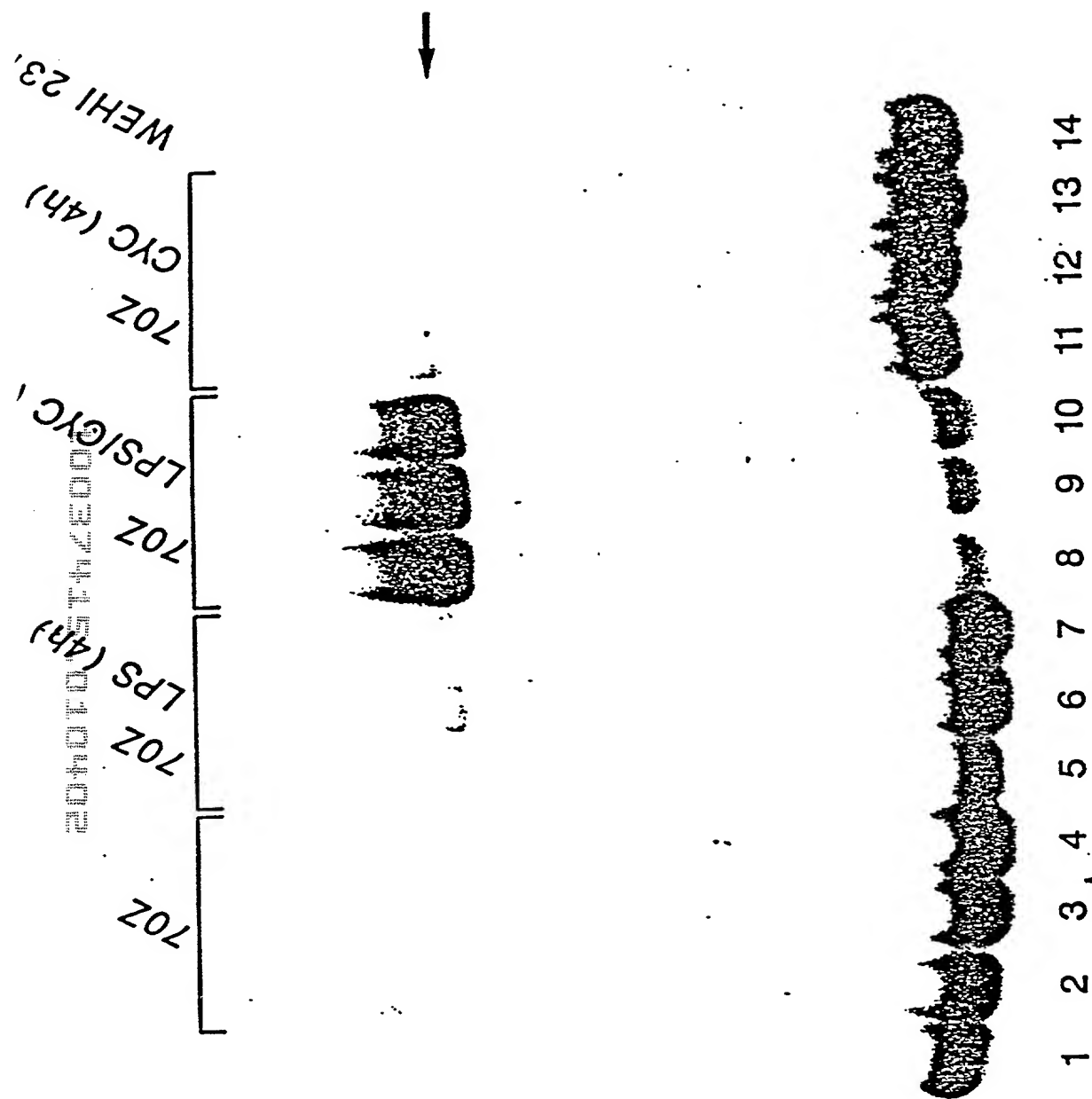
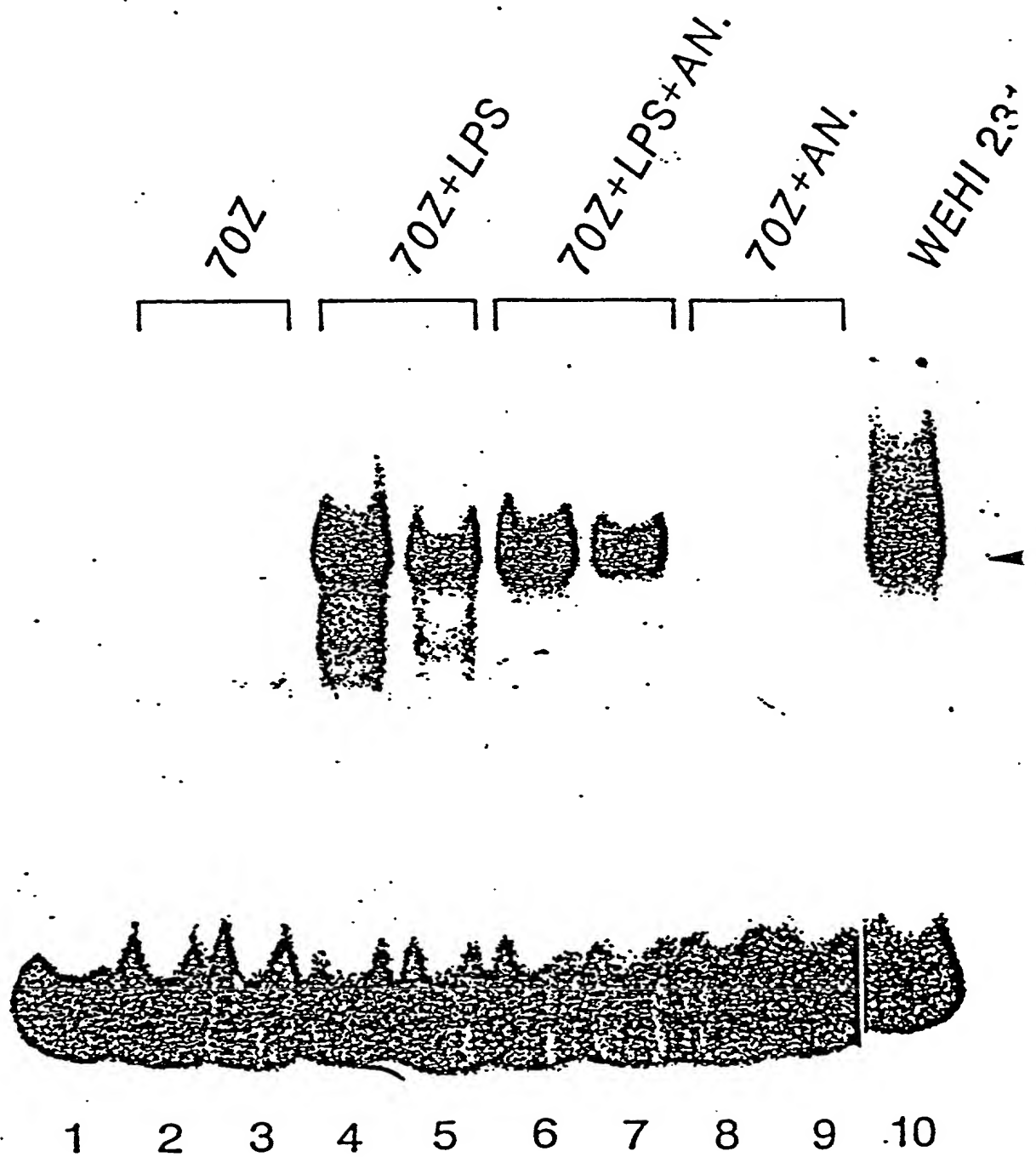
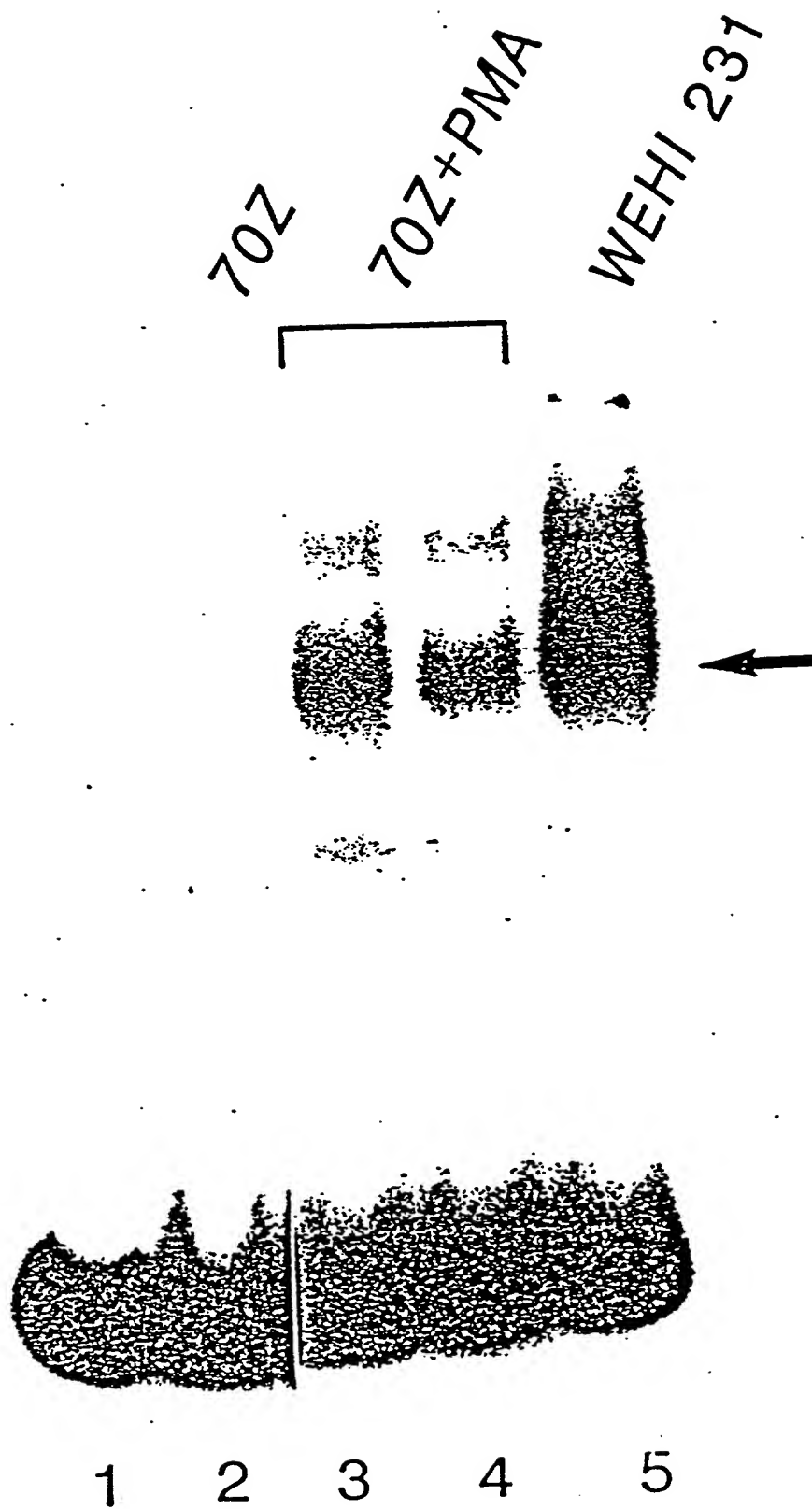


FIGURE 22B



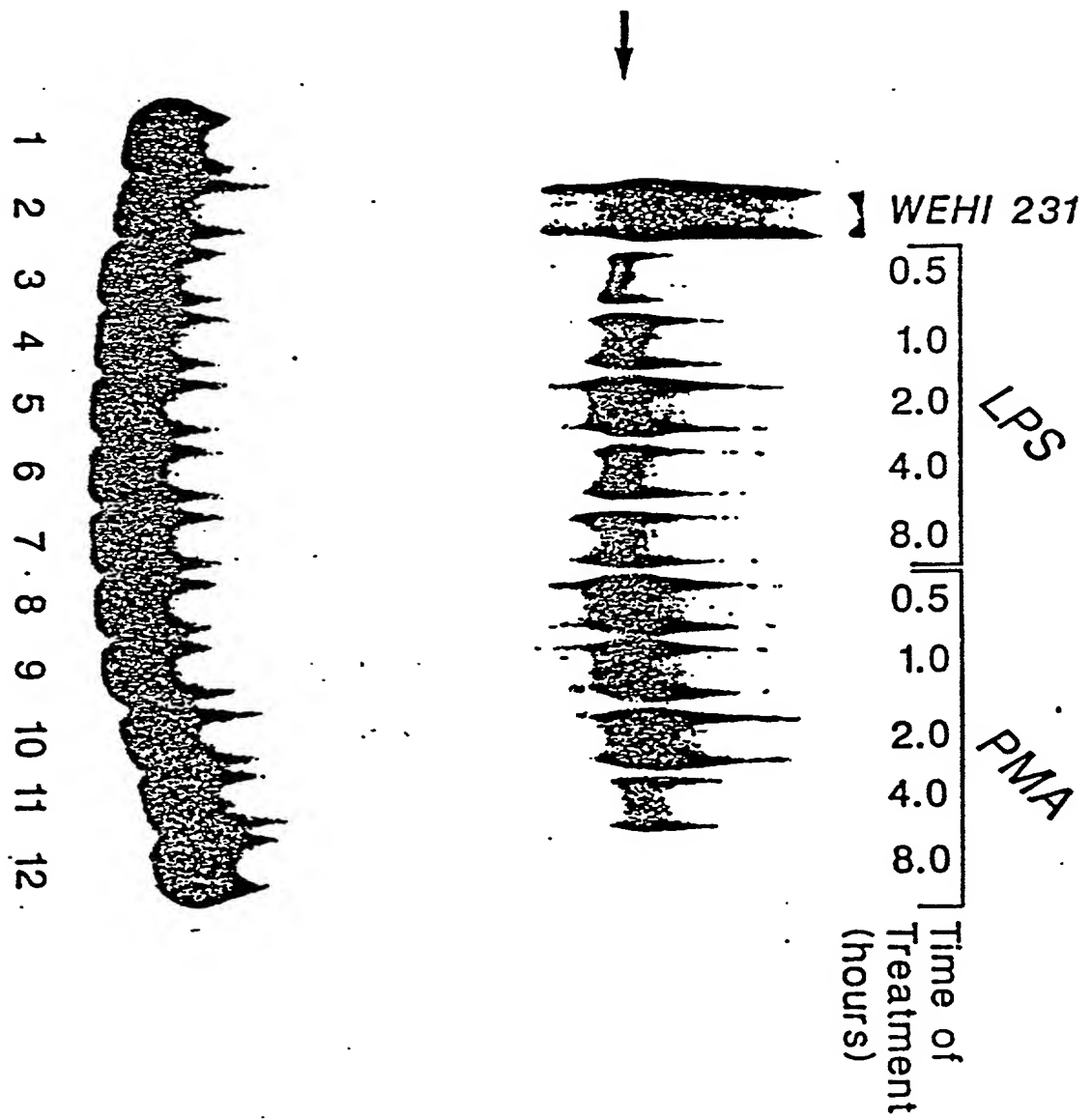
10037415.010403

FIGURE 23A



10037415.010402

FIGURE 23B



10037415.010402

FIGURE 24A

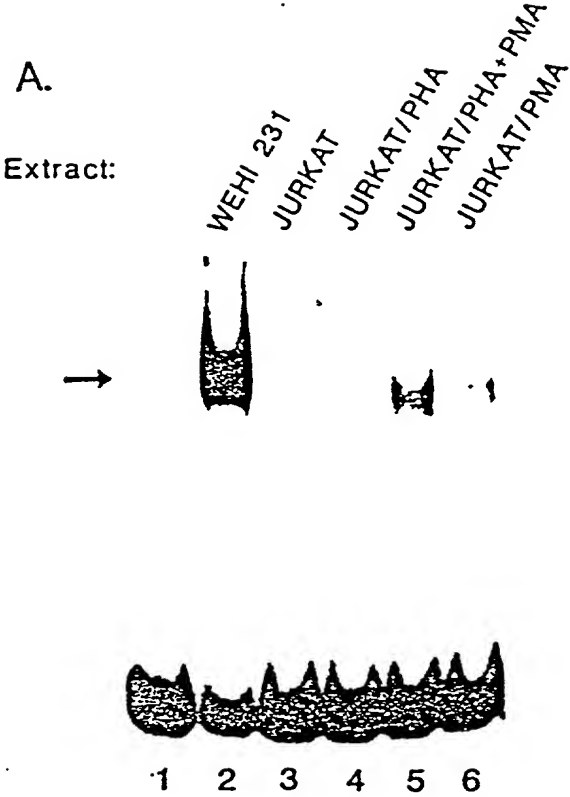
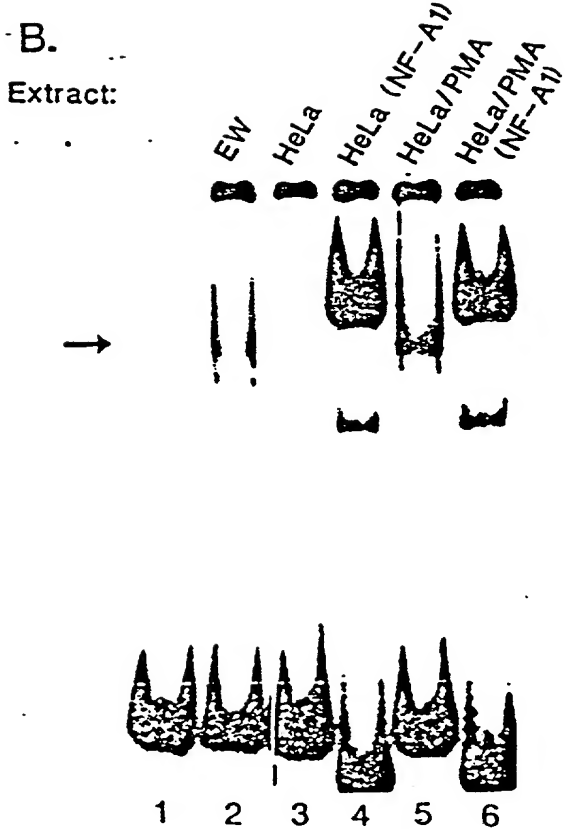


FIGURE 24B



Variable	Mean	SD	Min	Max
Age	34.2	5.8	21	48
Gender	0.52	0.50	0	1
Marital Status	0.68	0.48	0	1
Education	12.5	1.2	9	16
Income	15.2	3.5	10	25
Occupation	1.2	0.8	0	2
Health Status	1.8	0.5	1	3
Stress Level	2.1	0.7	1	3
Life Satisfaction	3.5	0.9	1	5
Work-Life Balance	2.8	0.6	1	4
Family Support	3.2	0.8	1	5
Community Involvement	2.5	0.7	1	4
Personal Growth	3.8	0.9	1	5
Financial Stability	2.9	0.7	1	4
Emotional Well-being	3.1	0.8	1	5
Physical Health	2.7	0.6	1	4
Social Support	3.4	0.8	1	5
Work Engagement	2.6	0.7	1	4
Life Balance	3.0	0.8	1	5
Overall Quality of Life	3.3	0.9	1	5

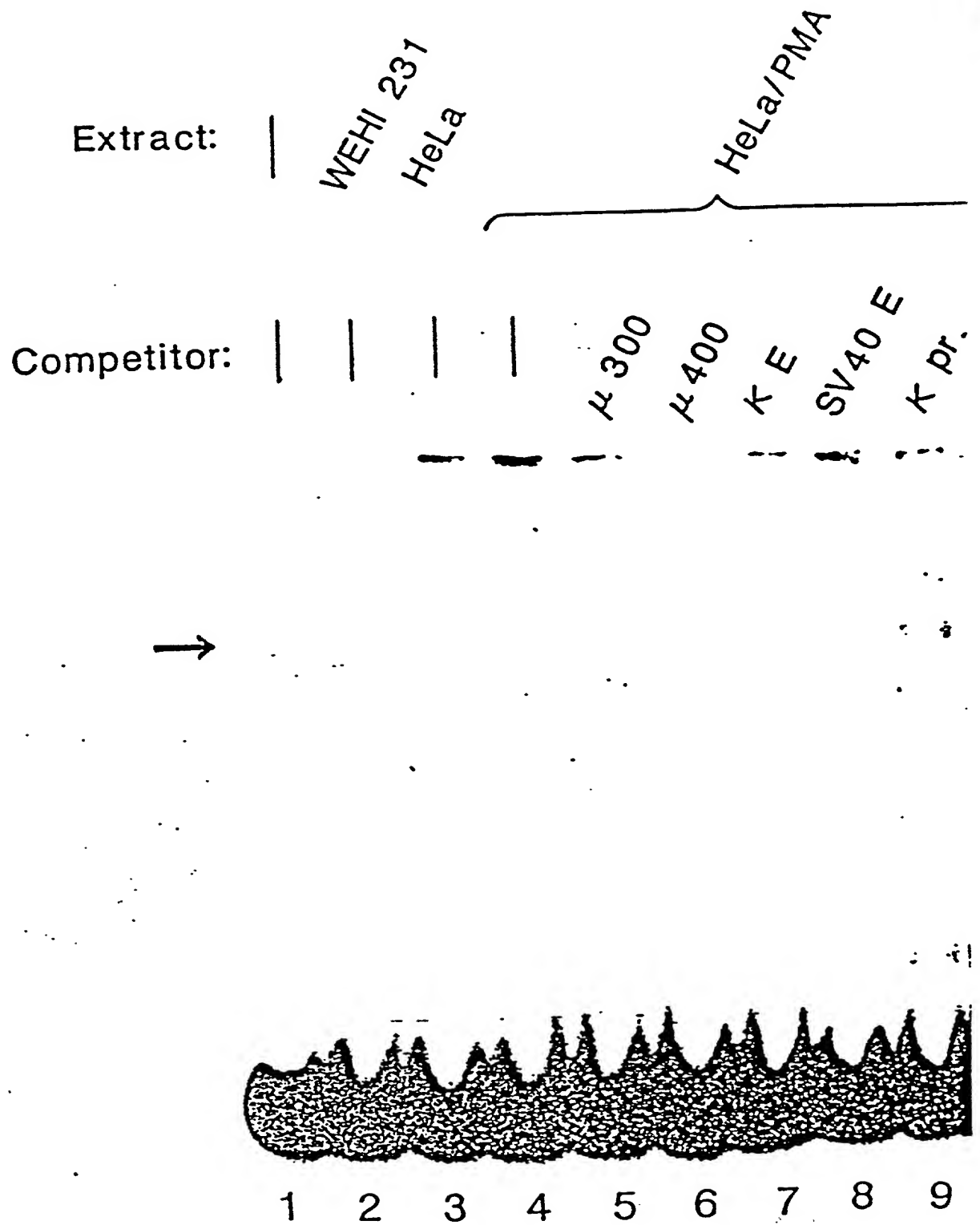
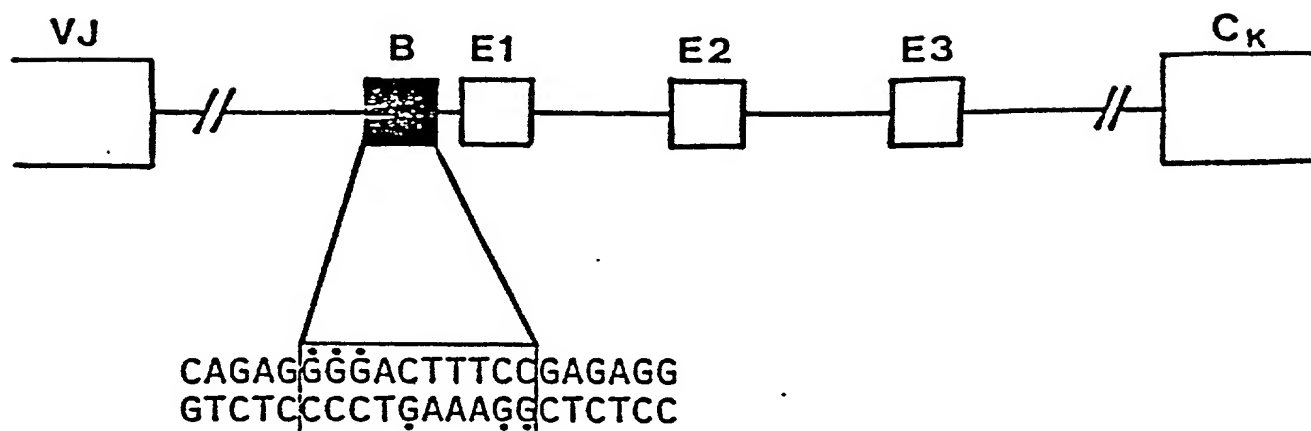


FIGURE 25

κ-Enhancer



HIV LTR

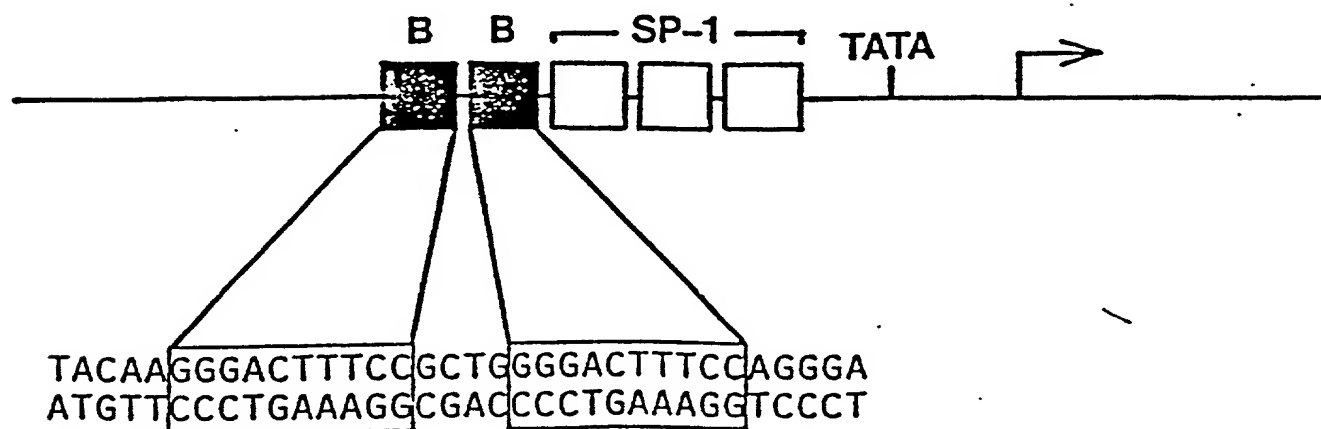
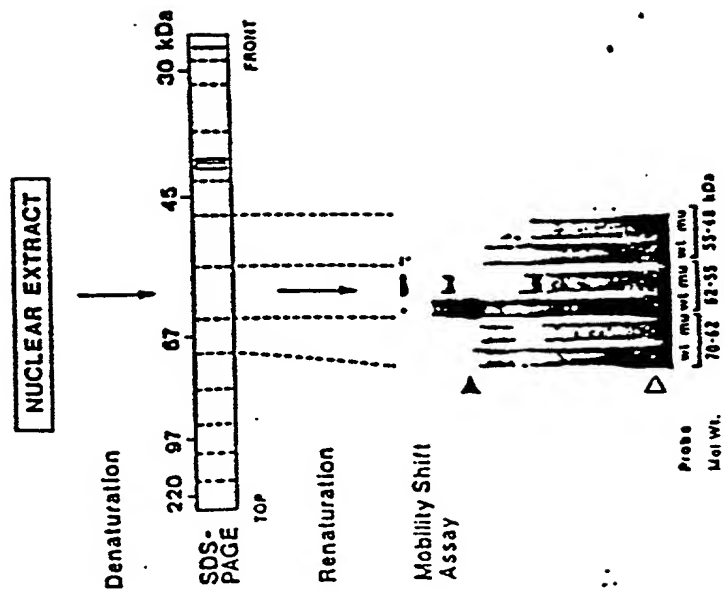


FIGURE 26

A



B

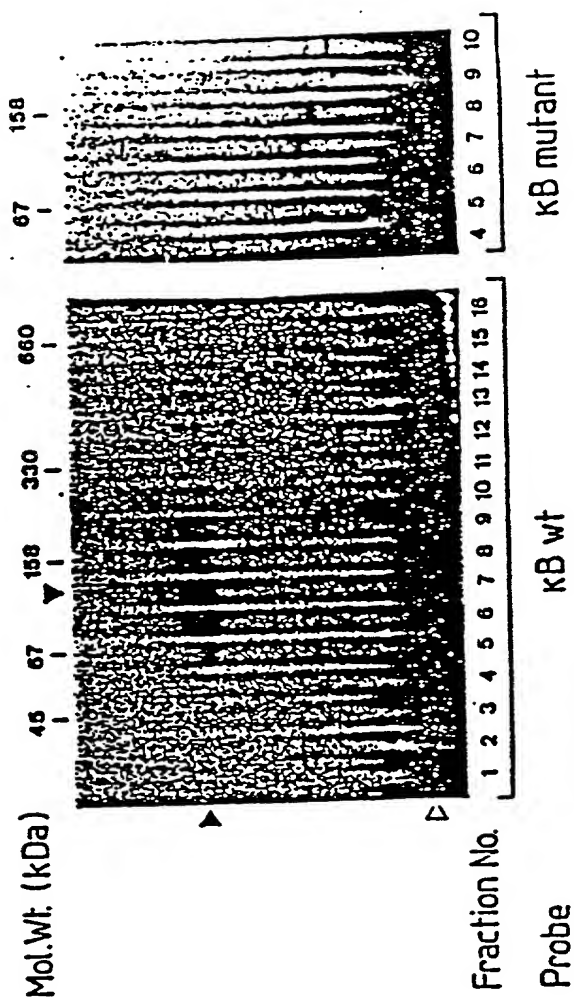


FIGURE 27 "STAGEOUT"

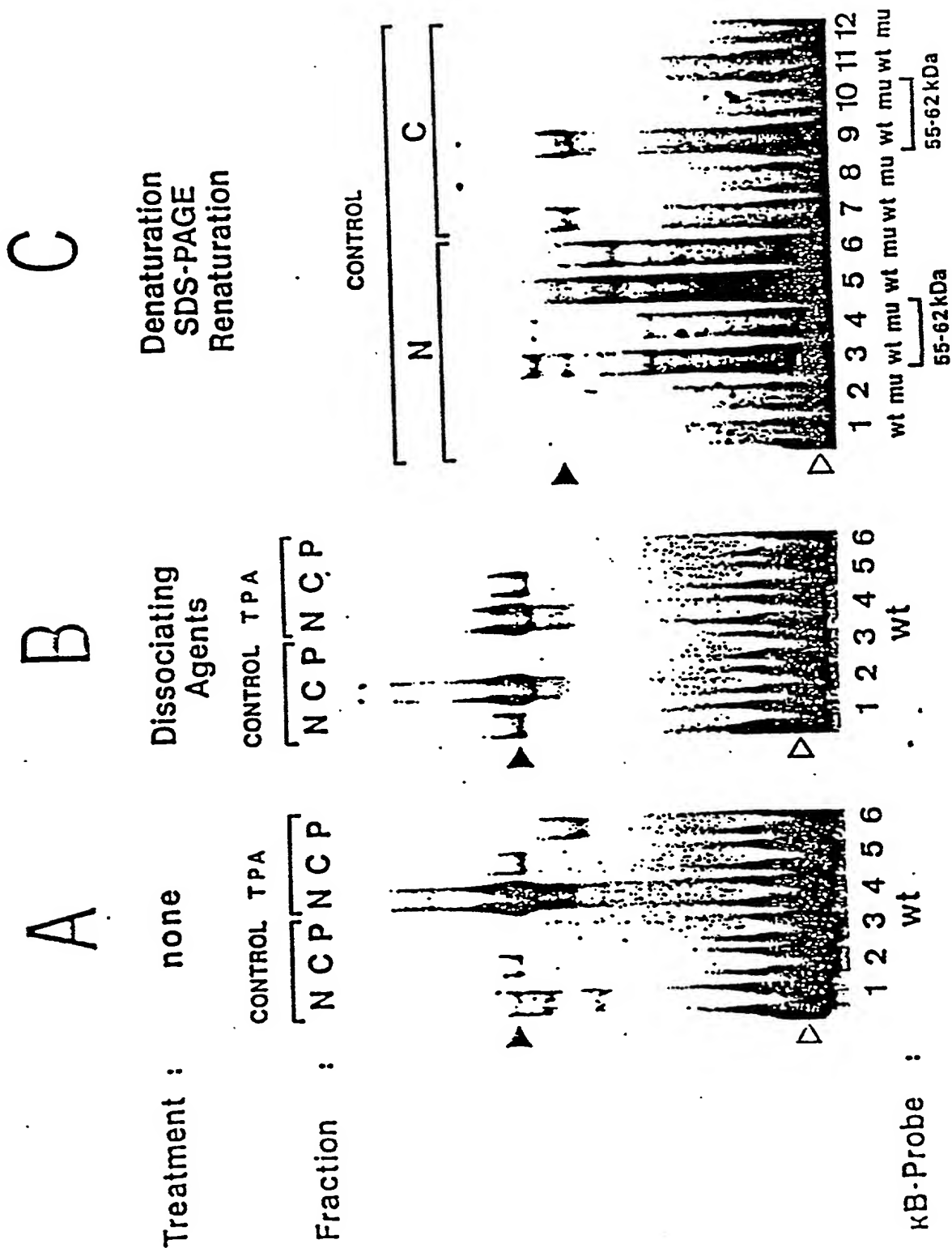
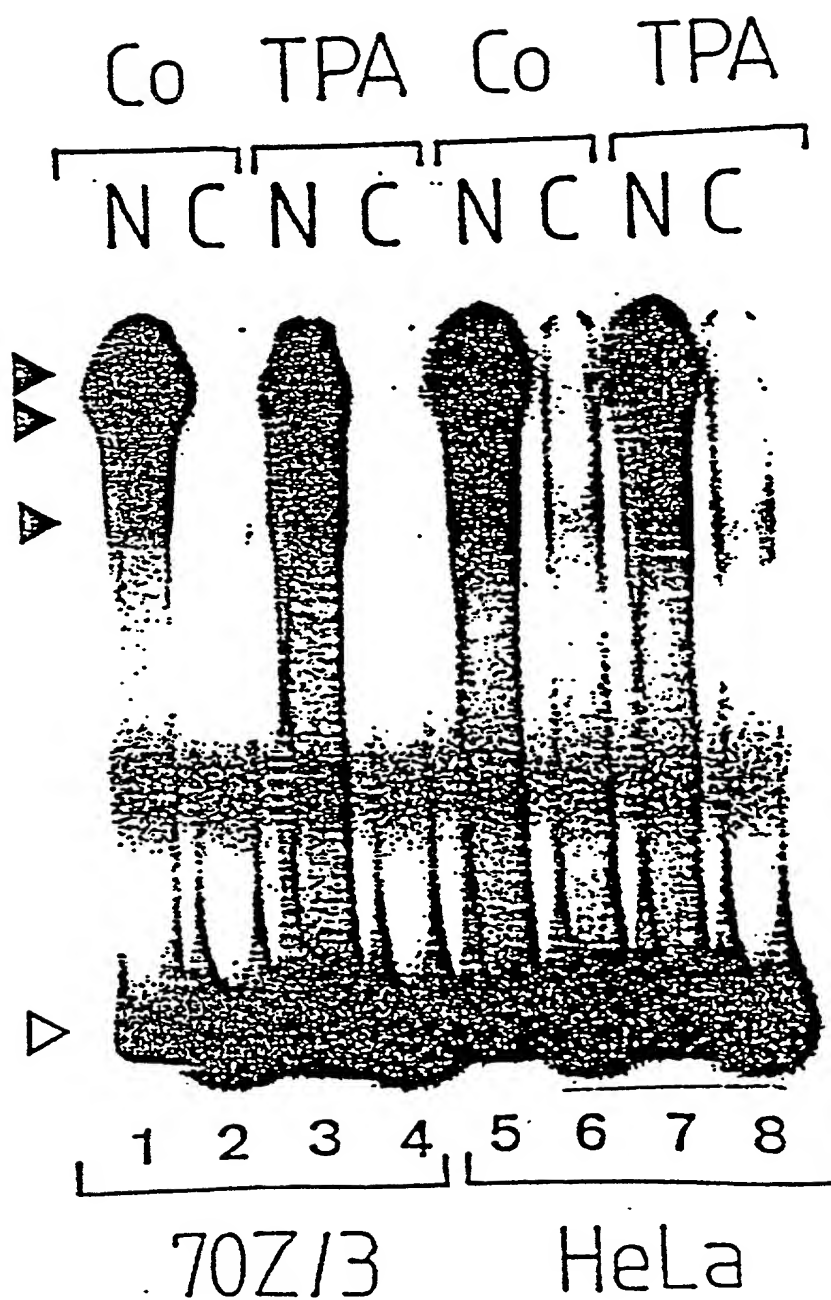


FIGURE 28



10037415.010400

FIGURE 29

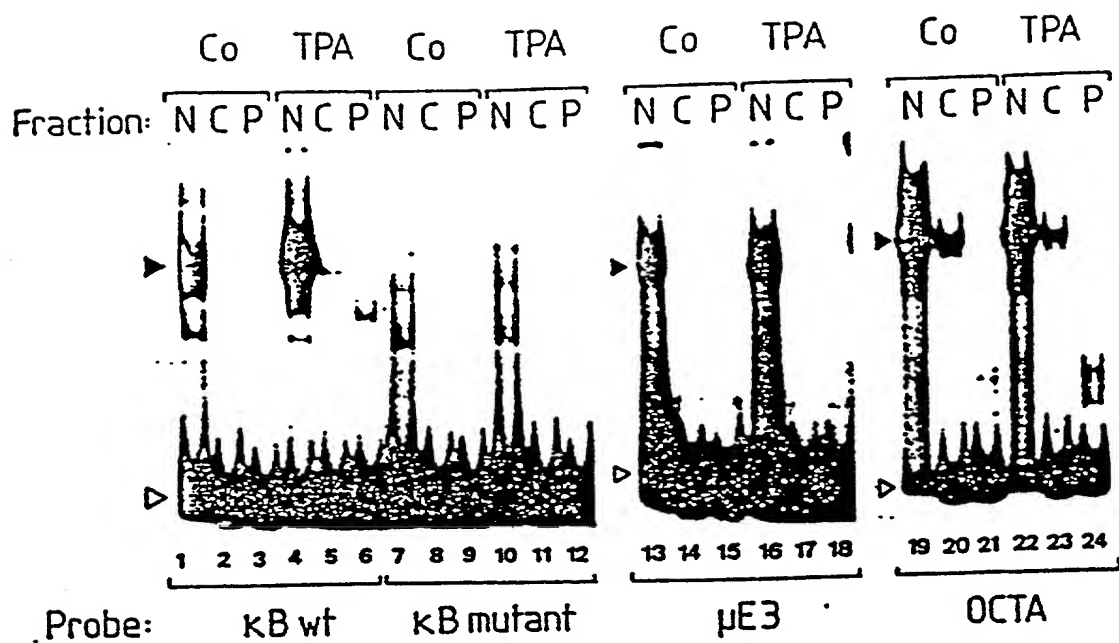


FIGURE 30

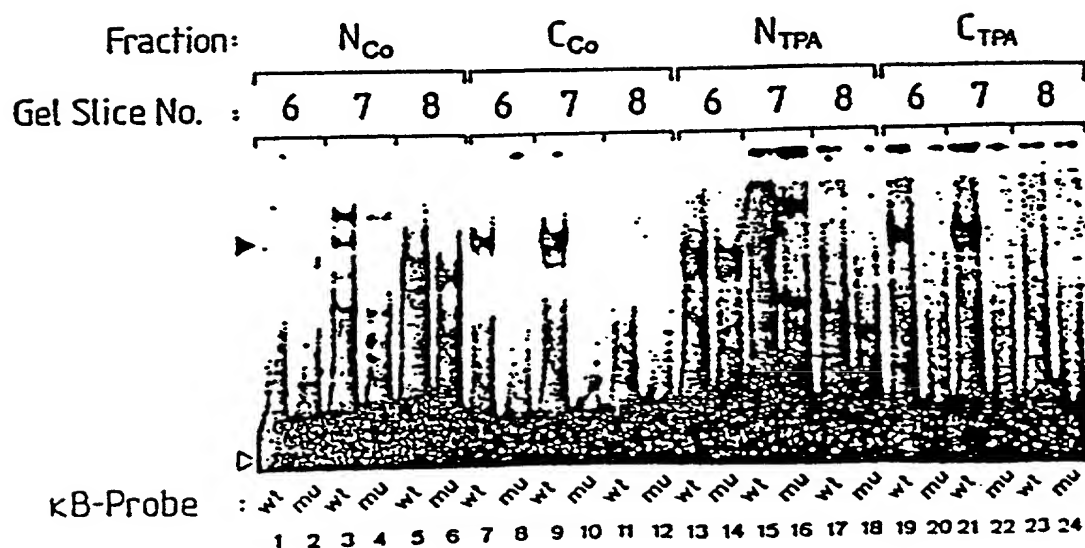


FIGURE 31

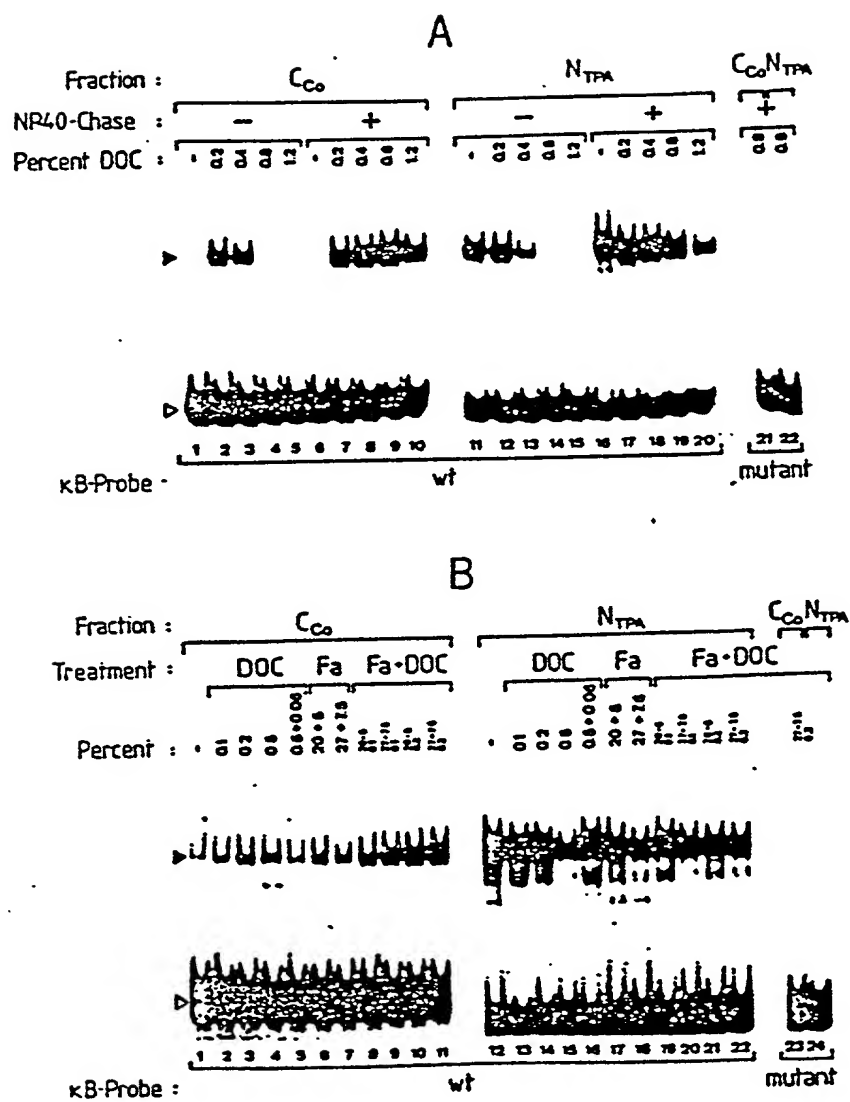


FIGURE 32

70Z/3

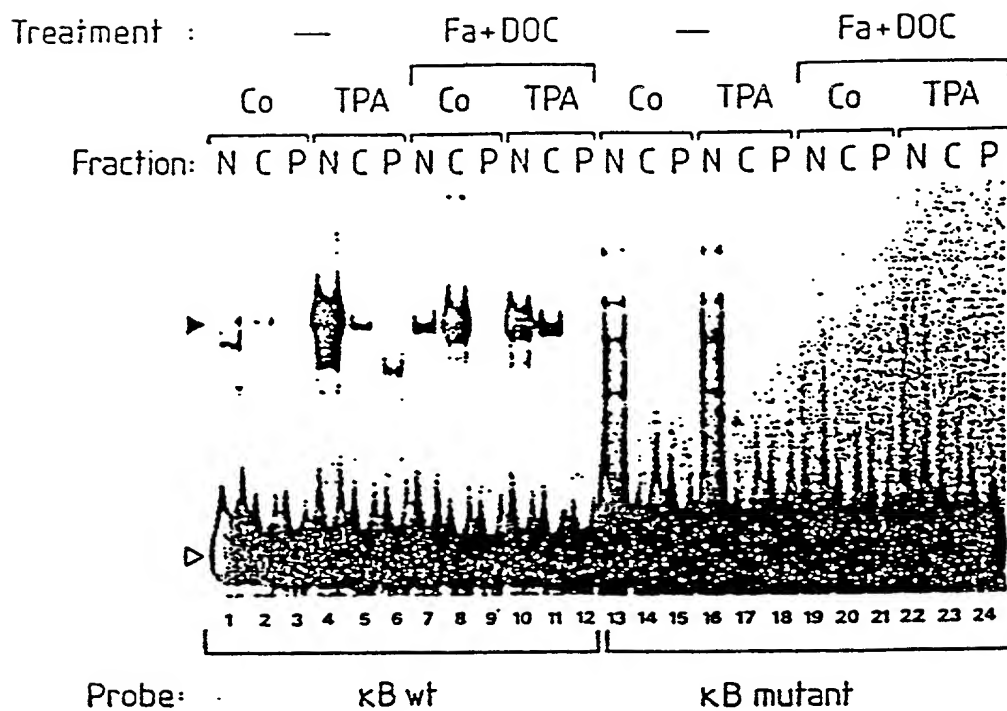


FIGURE 33

HeLa

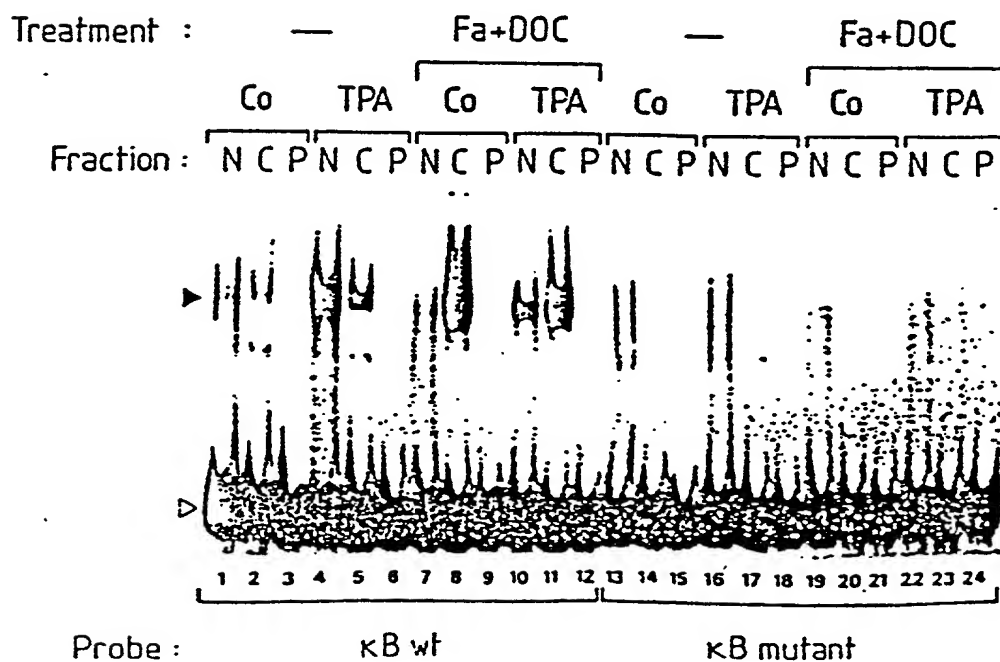
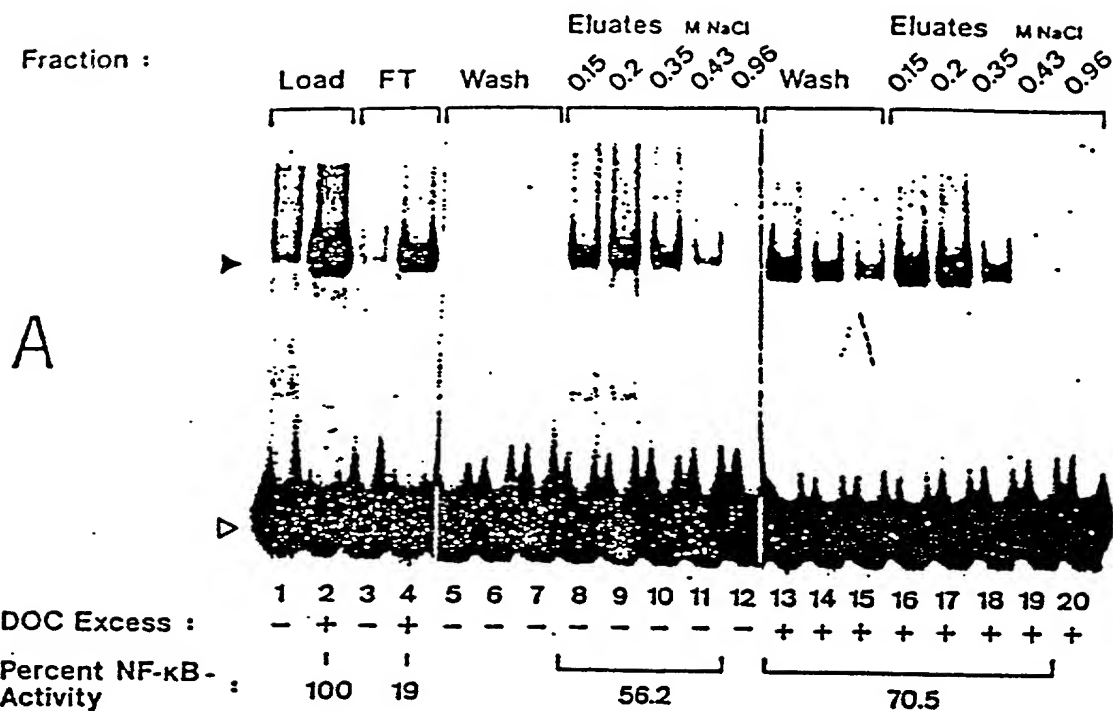


FIGURE 34



NF- κ B in :

	0.2M NaCl Fraction								Nuclear Extract (TPA)									
+ Cytosol	4	-	-	1	2	4	-	-	4	-	-	1	2	4	-	-		
+ NF- κ B-depleted Cytosol	-	4	-	-	-	-	1	2	4	-	4	-	-	-	-	1	2	4

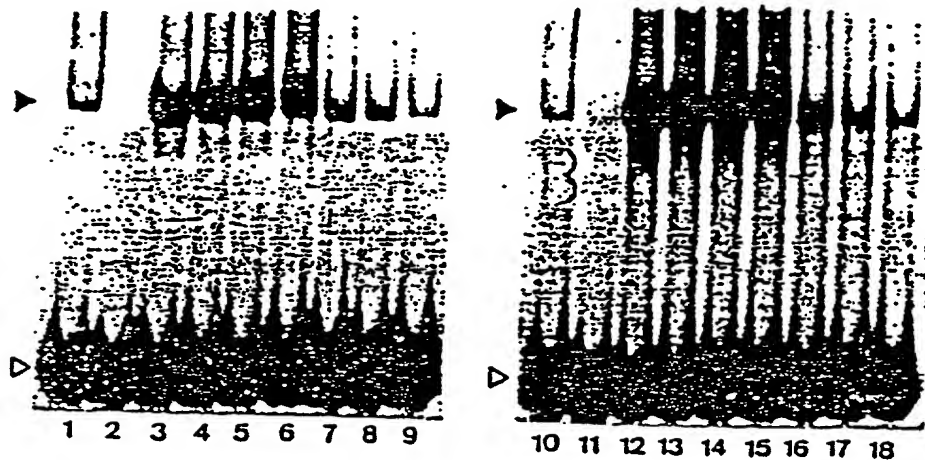


FIGURE 35

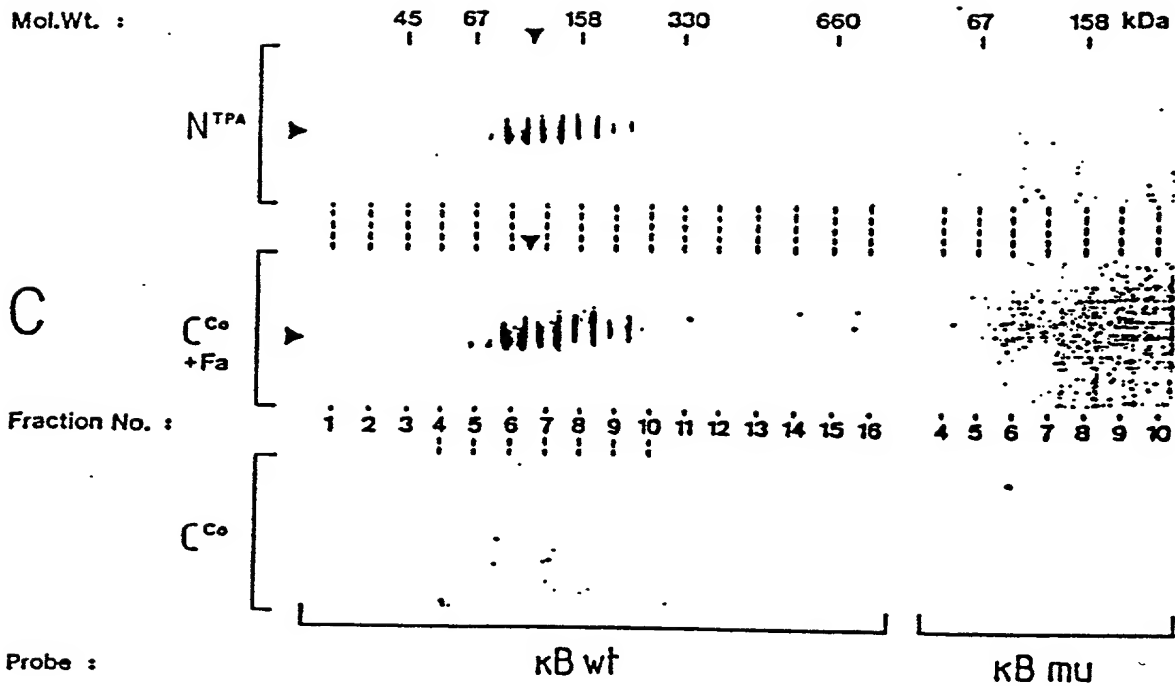
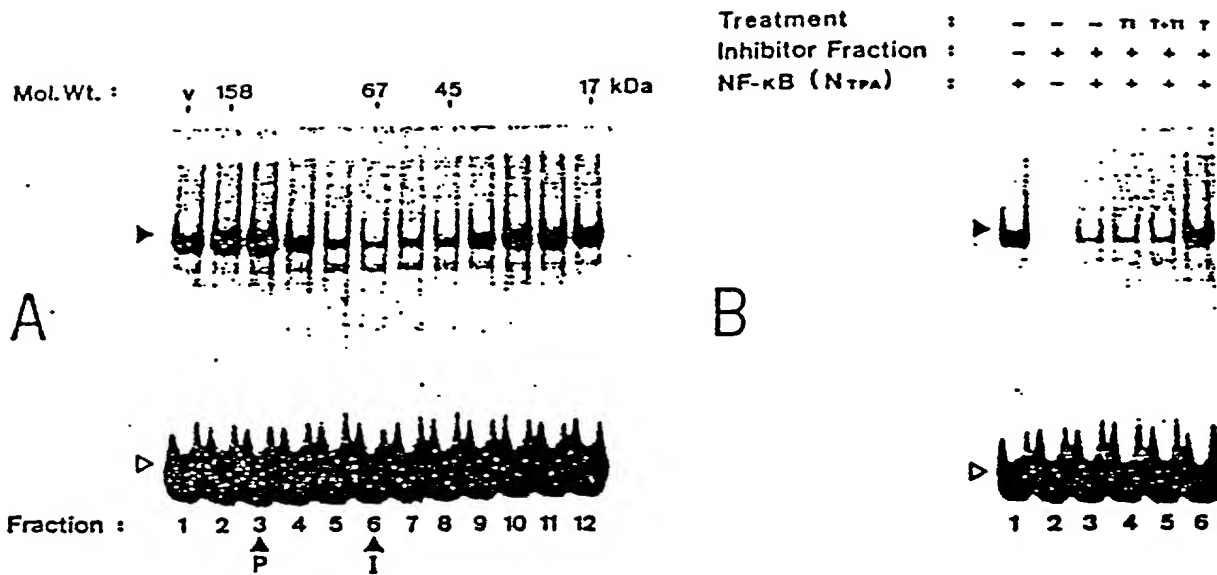


FIGURE 36

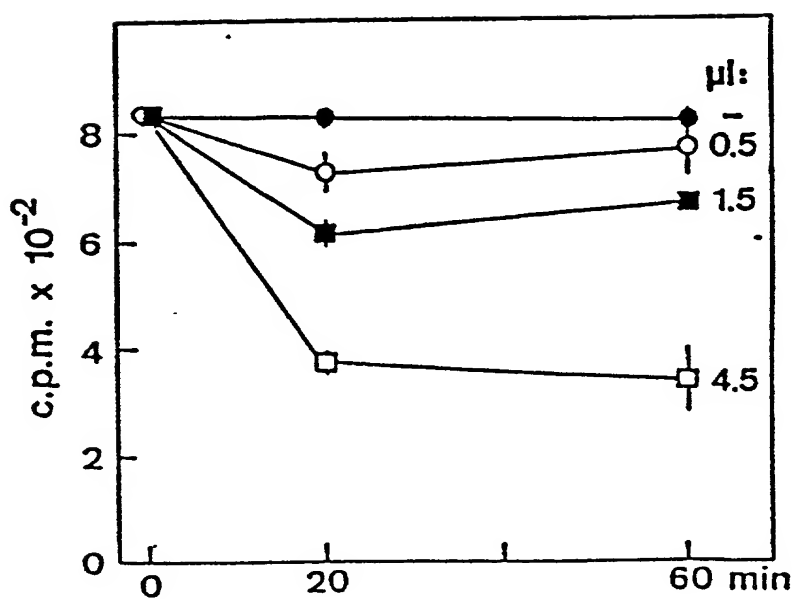
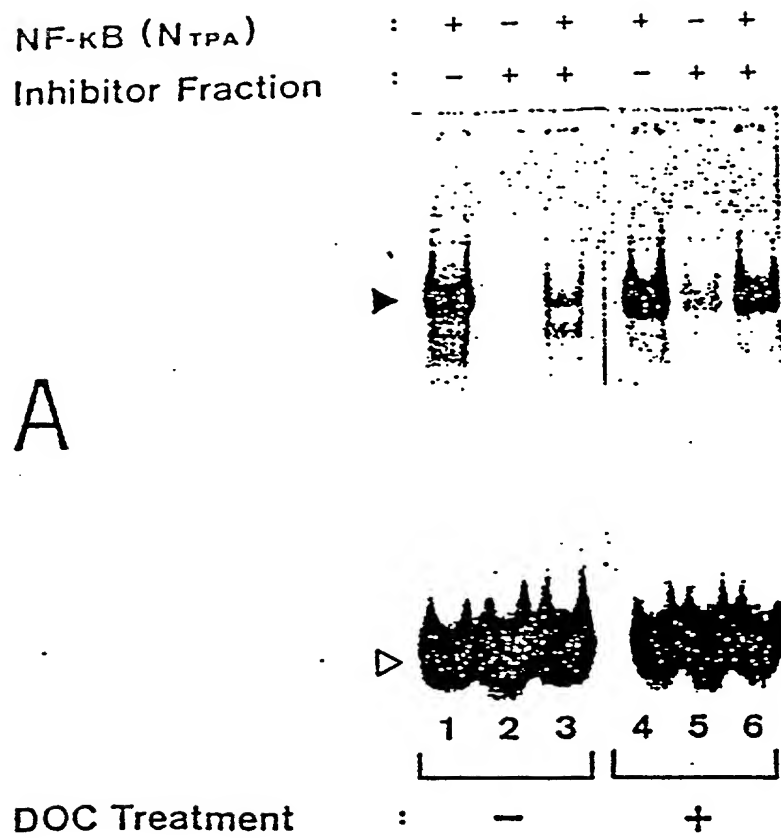


FIGURE 37

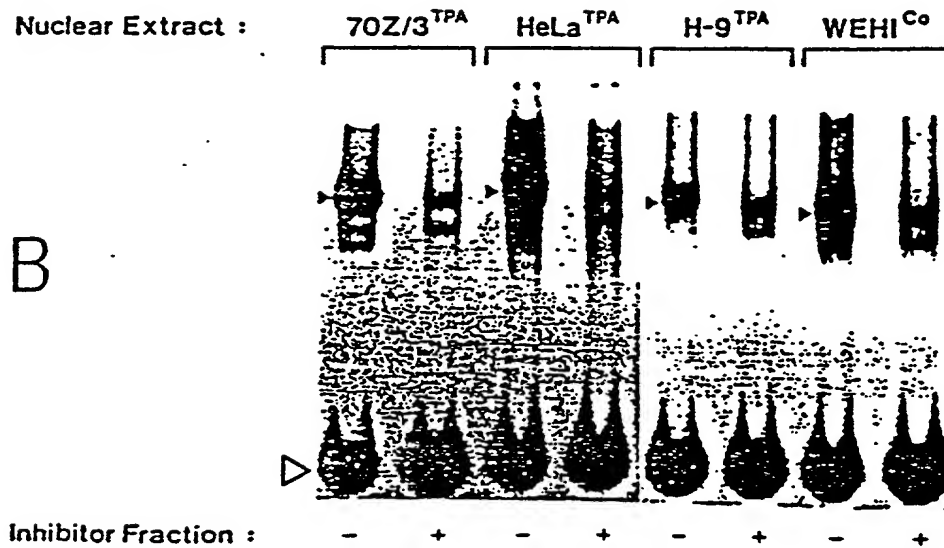
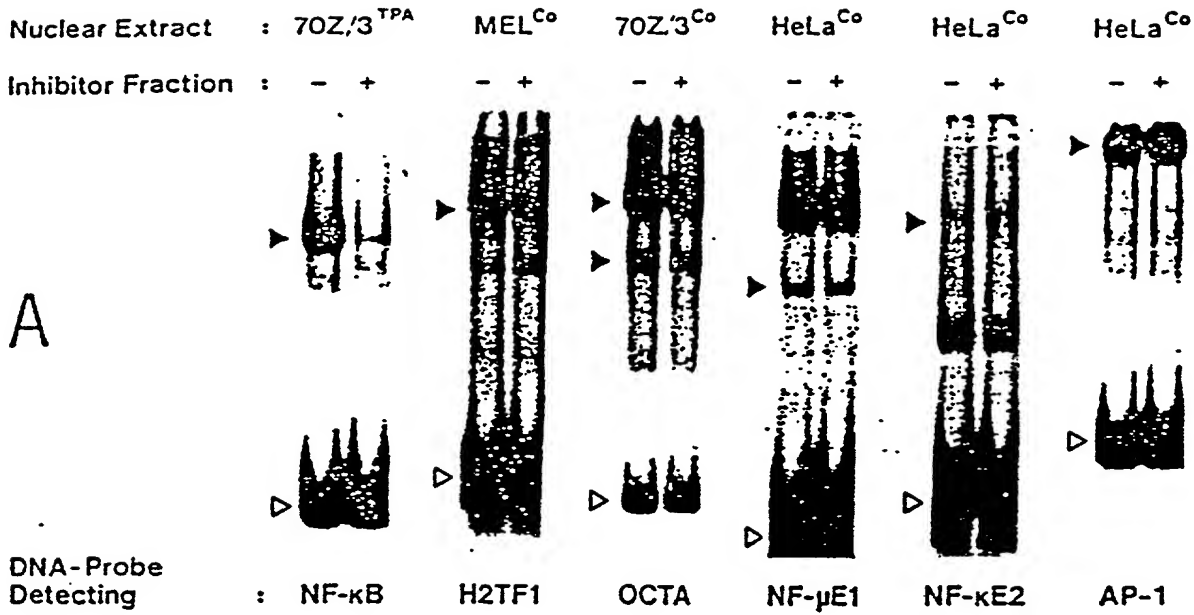
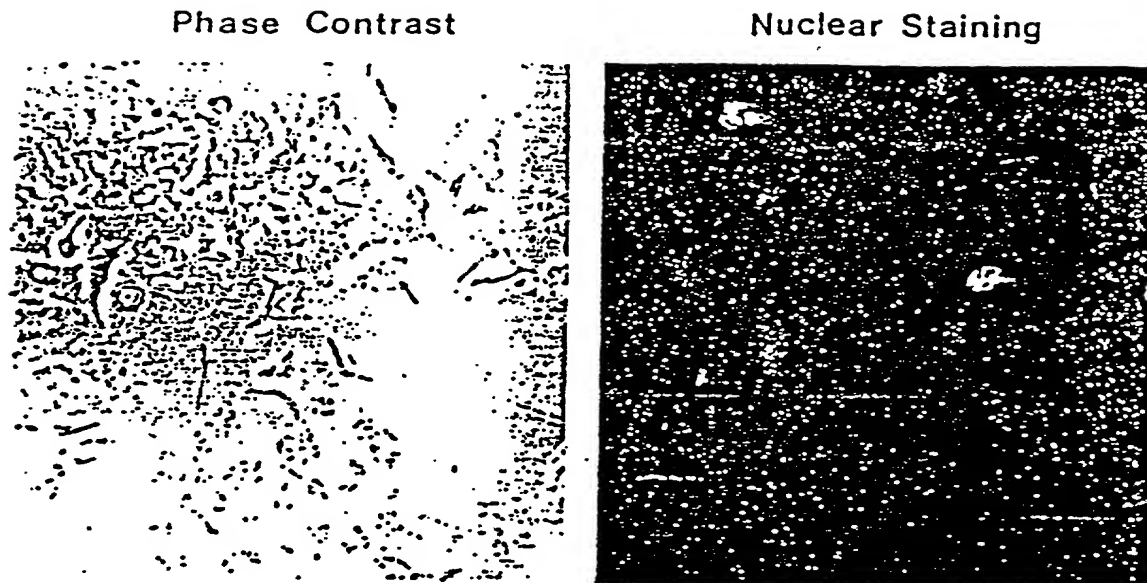
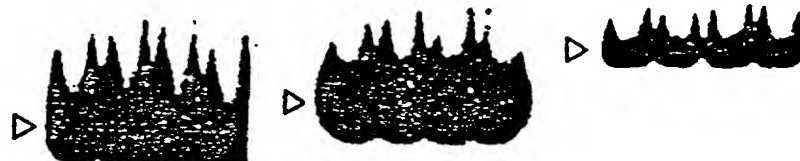


FIGURE 38



Enucleation : - + - + - +
 Treatment of Cells : Co TPA Co TPA Co TPA Co TPA Co TPA Co TPA



Probe : 1 2 3 4 5 6 7 8 9 10 11 12
 DOC-Treatment : - + -

κB

κB

AP-1

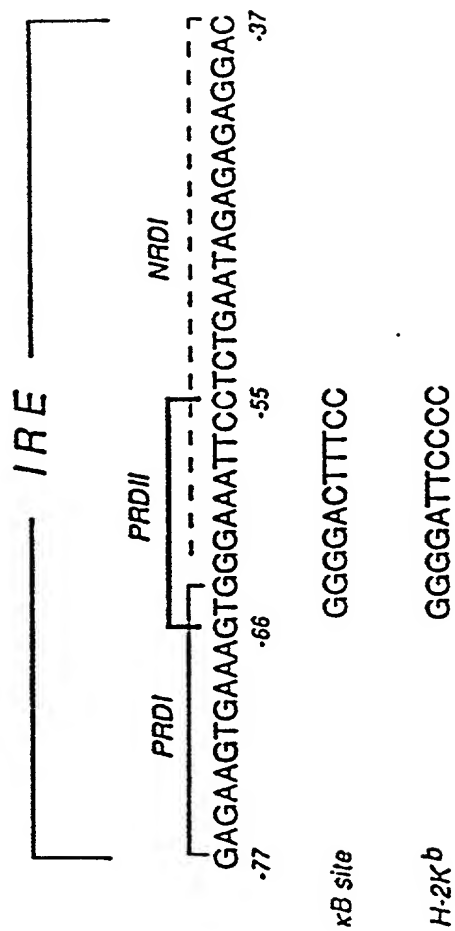


Figure 39

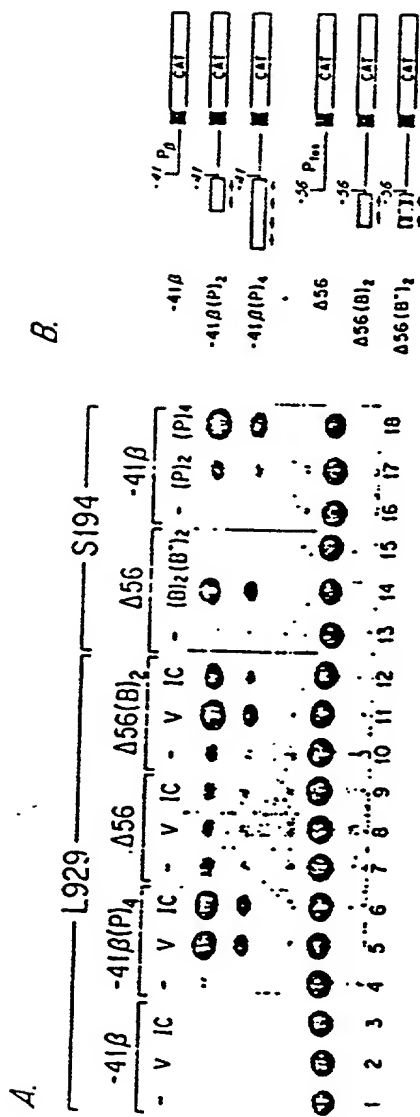


Figure 41

